AUGUST 1940

Soap

LIBRARY OF THE MAR

APPEAL?

ODOR APPEAL IS AN IMPORTANT FACTOR IN SOAP SALES

Givaudan will be glad to recommend an appropriate selection of new and smart pre-tested soap odors—odors that may be your pass key to wider markets.

GIVAUDAN DELAWANNA, INC.

EXECUTIVE OFFICES: 330 WEST 42nd STREET, NEW YORK, N. Y. PLANT AND LABORATORIES, DELAWANNA, N. J.

and Sanitary Chemicals

DIAMOND ALKALI CO.
58% LIGHT SODA ASH
58% LIGHT FLUFFY SODA ASH
DIAMOND SODA CRYSTALS
76% CAUSTIC SODA (SOLID & FLAKE)
LIQUID CAUSTIC SODA
QUALITY PRODUCTS for QUALITY SOAPS
STANDARD SILICATE DIV.
SILICATE OF SODA, LIQUID
SILICATE OF SODA, GLASS
SODIUM METASILICATE
SILICATED ALKALIES
5-4
DIAMOND ALKALI COMPANY, PITTSBURGH & EVERYWHERE

"Upped" His Sales When His Company Changed To

FULD'S DISINFECTANTS

FULD MAKES IT FOR THE LEADERS

IN BULK or packaged under PRIVATE LABEL

In one season a rooky salesman can graduate to a seasoned producer—fired with new confidence in the best Disinfectants the industry affords.

Selling the guaranteed strength and quality of Fuld-made Disinfectants puts a salesman's old mental-hazards on the other fellow's shoulder.

Selling .. Jobbers .. ONLY!

DEODORANT BLOCKS
LIQUID DEODORANTS
LIQUID CLEANERS
LIQUID SOAPS
OIL SOAPS
INSECTICIDES
DISINFECTANTS
SELF POLISHING WAXES
PASTE WAXES
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FLOOR SEALS
FLOOR TREATMENTS
METAL POLISHES
FURNITURE POLISHES
PLUMBING SPECIALTIES
SPECIAL CLEANERS
SOAP DISPENSERS
DEODORANT BLOCK HOLDERS

FULD BROS

702-710 SOUTH WOLFE STREET BALTIMORE

SALES OFFICES: SEATTLE • KANSAS CITY • SAN FRANCISCO • BOSTON
METROPOLITAN NEW YORK OFFICE: 127 TROUTMAN ST., BROOKLYN, N. Y. TELEPHONE: EVergreen 8-2498

INDEPENDENT AND HELPFUL

Important to Can Buyers

Nothing is more interesting to can buyers than a source of supply that makes strong, leak-proof, handsomely decorated containers available at a fair price.

The demand for such a service is greater than ever before. Perhaps that is why users in ever increasing number are coming to Crown for the solution of their problems, recognizing that in Crown's ultra-modern plants quality control is given new emphasis.

CROWN CAN COMPANY, PHILADELPHIA, PA.

Division of Crown Cork and Seal Company

BALTIMORE ST. LOUIS HOUSTON MADISON ORLANDO
FORT WAYNE NEBRASKA CITY

CROWN CAN

Soap and Sanitary Chemicals

Reg. U. S. Pat. Office

Volume XVI
Number 8

AUGUST
1940

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MEMBER AUDIT BUREAU OF CIRCULATIONS

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FOR BETTER AQUEOUS DEODORIZING SPRAYS USE ORBIS

"HYDROSPRAY" PERFUME OILS

They are scientifically treated so that a finished spray in permanent milky emulsion form is obtained by merely mixing 3 ounces of "Hydrospray" and 3 to 5 ounces of formaldehyde solution with sufficient water to make 1 gallon. Color if desired.

Write for further information and prices.

ODORS AVAILABLE

Jasmin . . . Lilac . . . Locust Blossom . . . Orange Blossom
Persian Bouquet . . . Pineneedle . . . Rose . . . Woodland Violet

Special odors furnished on request.
Samples available to interested manufacturers.

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PRODUCTS CORPORATION

215 PEARL STREET, NEW YORK - FACTORY & LABORATORY, NEWARK, N.J.

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Water Soluble Gums
Filter Paper
Aromatics
Rice Starch
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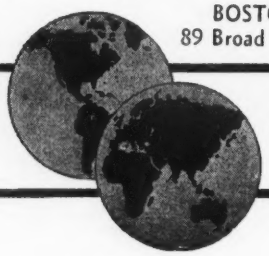

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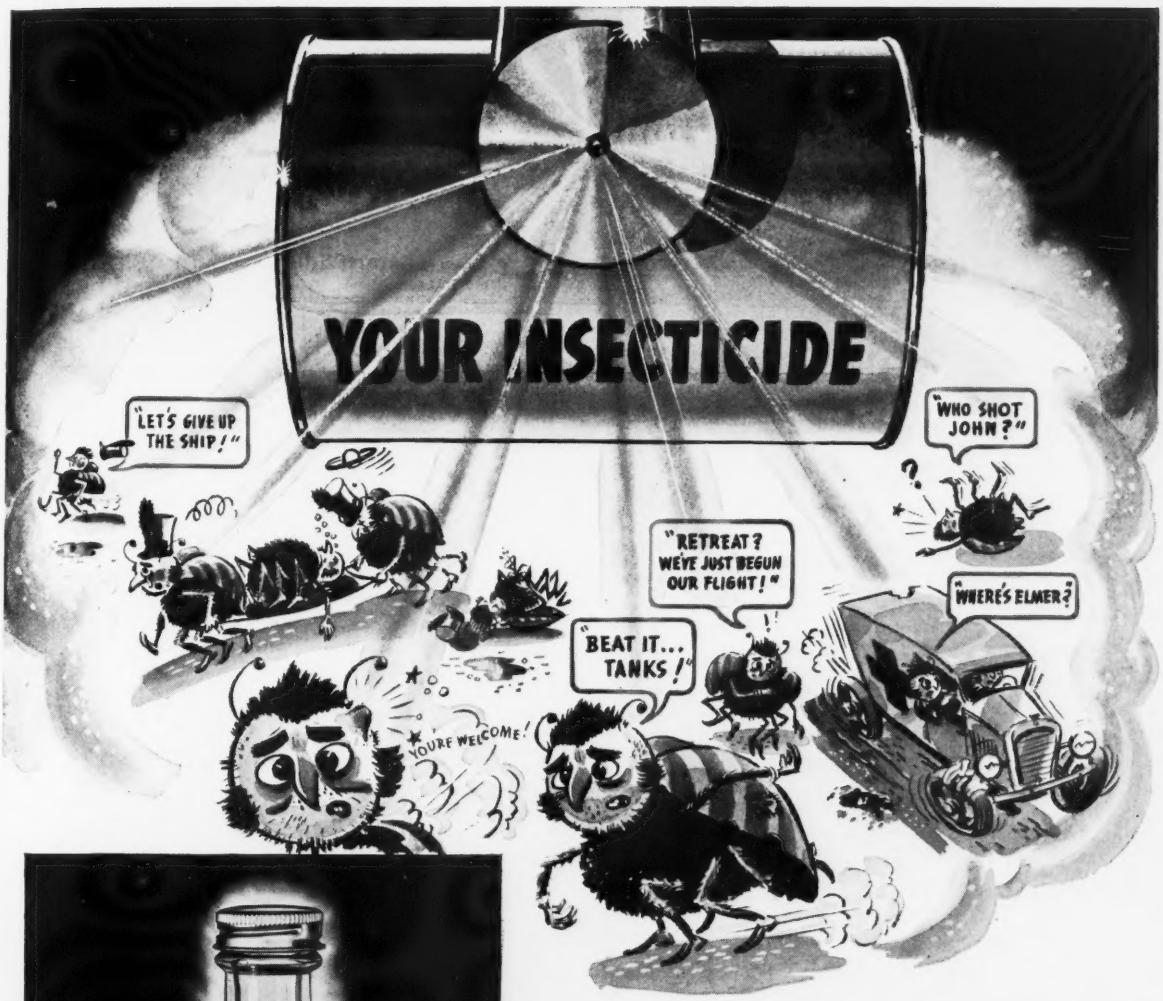
Oleo Resins
Perfume Bases
Olive Oil
Fruit Flavors
Food Colors
Quince Seed
Irish Moss



DOES YOUR INSECTICIDE WAGE "TOTAL WAR?"

A MODERN, PRACTICAL GLASS CONTAINER WILL KEEP IT FRESH, CLEAN, STRONG... *AT PERFORMANCE PEAK!*

● You can't keep an insecticide at effective strength if it's packed in an old-fashioned container that allows evaporation, that rusts and gets dirty, that permits seepage and leakage. But in a modern Anchor Hocking *glass* package with a sure-sealing Anchor Amerseal Cap, your insecticide will *stay strong*—right down to the last *visible* drop! Have *you* looked into the possibilities of packing with this unbeatable, modern, *clean* combination? You should. In it may lie the answer to your resale problem! Drop us a line, or send a wire. We have some mighty practical suggestions on packaging and selling household disinfectants that are sure to interest you!

ANCHOR HOCKING GLASS CORPORATION, Lancaster, Ohio
Closure Subsidiary: ANCHOR CAP & CLOSURE CORPORATION
Lancaster and Toronto, Canada

ANCHOR HOCKING GLASS CAPS *-an unbeatable combination*

Molecular Weights

and

SOAPY LATHER

SOME soaps lather up more furiously and quickly than others. There are aeons of difference, we'll say, between a palm kernel oil soap and a castor oil soap.

A study of the chemical constants of oils brings the following observations. Low molecular weight and low iodine number oils give the foamiest lather. High molecular weight and high iodine number oils give poorer lather.

A soapmaker must use his oils as a violinist uses his strings. A Mendeléeff of the soap kettle can tell you pretty much in advance how a strange soap oil will act by just looking at its chemical constants.

CONSULT CLIFTON

on

POTASH SOAPS

Vegetable Oil Soaps — **Green Soaps**

Liquid Hand Soaps — **Liquid Floor Cleansers**

as well as allied products such as

Coal Tar Disinfectants — **Cresol Solutions**

Pine Disinfectants — **Rubless Waxes**

Furniture Polishes — **Perfumed Deodorizing Sprays.**

Liquid Soap Dispensers

CLIFTON CHEMICAL CO., INC.

248 FRONT STREET — **NEW YORK CITY**

eye catcher

AN EYEFUL of color is your first compelling invitation to the customer in a store to consider your PARA or NAPHTHALENE product in preference to others. Follow up with pleasant and correct fragrance and the sale is clinched.

With Felton COLOROMES, you can be certain to produce fast-selling deodorant blocks and crystals. In one simple step, they economically add attractive color and fragrance which lasts until the final crystal has evaporated.

SEND TODAY FOR SAMPLES AND PRICE LIST! YOUR CHOICE OF 12 POPULAR ODORS AND COLORS!

FELTON Quality

FELTON
CHEMICAL COMPANY, INC.
603 Johnson Ave., Brooklyn, N. Y
Stocks in Principal Cities

Felton Quality ..... the Quality that Sells

WHY AQUAROMES ARE OUTSTANDING

WATER SOLUBLE PERFUME OILS

Note how clear the water solution of Felton AQUAROMES on the left is in comparison with ordinary water soluble perfume oils. AQUAROMES are completely soluble, and as you see, leave no trace of oil film or cloudiness.

You can use AQUAROMES to economically and attractively perfume a large variety of products such as Liquid Shampoos, Liquid Soaps, Theatre Sprays, Deodorant Sprays and Formaldehyde Sprays . . . in fact any product using water as a base.

There are a large number of popular fragrances . . . and a correct one for exactly the type of product you wish to perfume to best advantage.

WRITE TODAY FOR SAMPLE!

FELTON Quality

FELTON CHEMICAL COMPANY, INC.
603 Johnson Ave., Brooklyn, N. Y.

Manufacturers of AROMATIC CHEMICALS, NATURAL DERIVATIVES, PERFUME OILS, ARTIFICIAL FLOWER AND FLAVOR OILS

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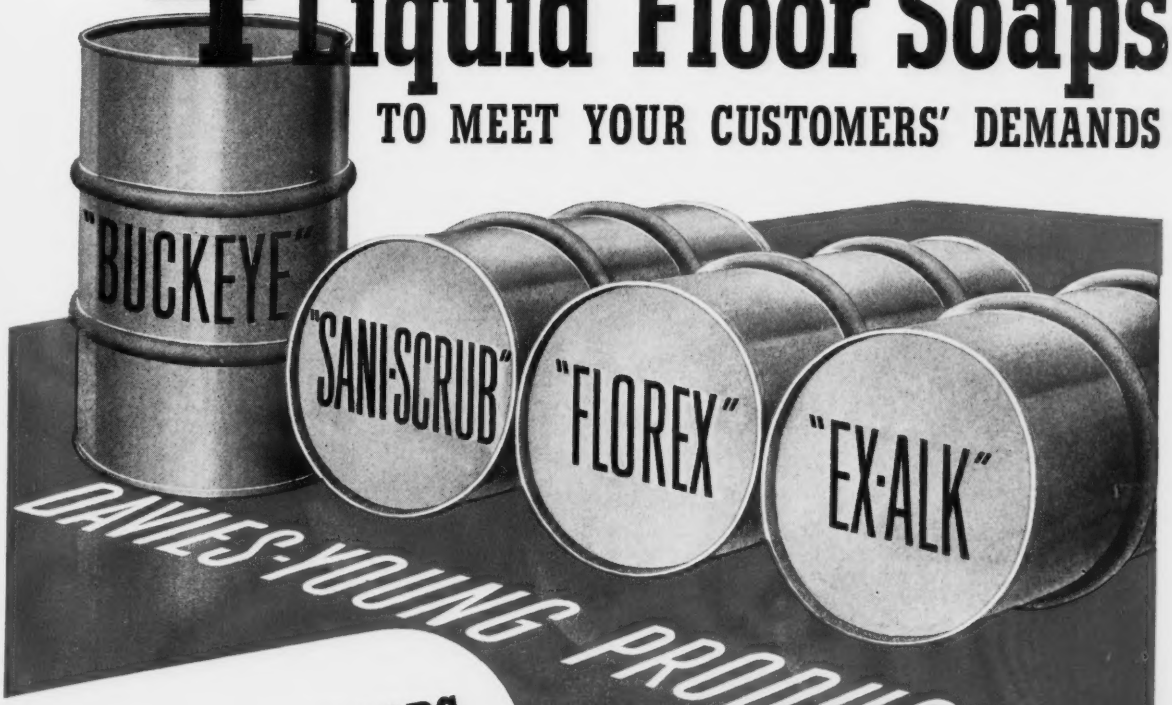
Build 4 Business on Quality Lines . . .

4 Liquid Floor Soaps

TO MEET YOUR CUSTOMERS' DEMANDS



DAVIES-YOUNG PRODUCTS

4 FOR RUBBER FLOORS

The following Davies-Young Floor Soaps are approved by the Rubber Manufacturers' Association, Inc.:

BUCKEYE PLAIN LIQUID SCRUBBING SOAP

BUCKEYE SASSAFRAS LIQUID SCRUBBING SOAP

BUCKEYE WAX CLEANER

BUCKEYE SPECIAL RUBBER CLEANER

Liquid floor soaps (scrubbing soaps) are widely used today because of their ease of handling, immediate and complete solubility in water, and effective cleaning properties. The several Davies-Young soaps are each specifically compounded for certain types of floors. (Buildings having more than one type of flooring often require several different cleaners to maintain them properly and economically.) Build up your business by recommending and selling *the right cleaner for the right surface.*

THE DAVIES-YOUNG SOAP CO.,
DAYTON, OHIO SOAPS FOR EVERY PURPOSE; FLOOR WAXES, SANITARY SUPPLIES

Copyright 1939, The Davies-Young Soap Co.

MAIL TODAY FOR SAMPLES AND PRICES

The Davies-Young Soap Co.
Dayton, Ohio

Please mail samples and prices of your Liquid Scrubbing Soaps.

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ADDRESS_____

CITY AND STATE_____

Cyclamal

The Accepted Basis
For Floral Perfumes
(Lily of the Valley, Lilac, etc.)

A single chemical having the Properties most desired by the perfumer.

Great Strength
(5 times stronger than Hydroxy Citronellal with which it blends well.)
Result: Economy

Persistence in Odor
Result: The assurance that your product will reach the consumer properly perfumed and that your expenditure for perfume has not been wasted.

Freedom from Irritation
Result: Permitting its use in Cosmetics as well as Soap and Perfumes.

Freedom from Discoloration
Result: No worries about returned goods from this cause.

Cyclamal is of 100% Purity.

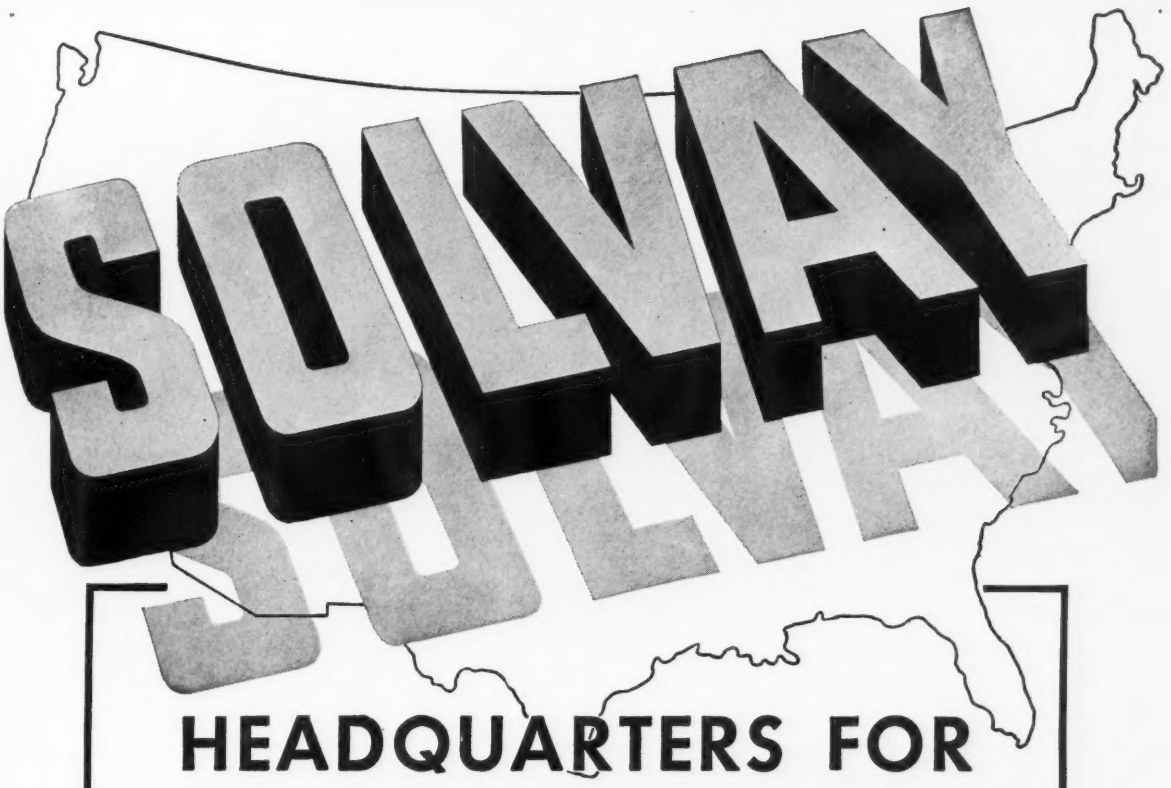
ALSO INVESTIGATE

Phenyl Ethyl Alcohol Verona
Ionone 100% Verona
Ionone Methyl Verona
Alpha Amyl Cinnamic Aldehyde Verona

Requests for samples on your firm's letterhead will be promptly answered.

AROMATICS DIVISION
GENERAL DRUG COMPANY

170 Varick St., New York
9 S. Clinton St., Chicago, Ill.
Transportation Bldg., Los Angeles, Cal.
907 Elliott St. West, Windsor, Ontario



HEADQUARTERS FOR

ALKALIES

and related products

Write for a copy of the Solvay Products Book for information regarding these High Quality Solvay* Products:

Soda Ash
Caustic Soda
Causticized Ash
Modified Sodas
Calcium Chloride
Liquid Chlorine
Ammonium Chloride

Caustic Potash
Potassium Carbonate
Ortho-dichlorobenzene
Para-dichlorobenzene
Para-Baco*
Sodium Nitrite

*Trade Mark Reg. U.S. Pat. Off.

SOLVAY SALES CORPORATION

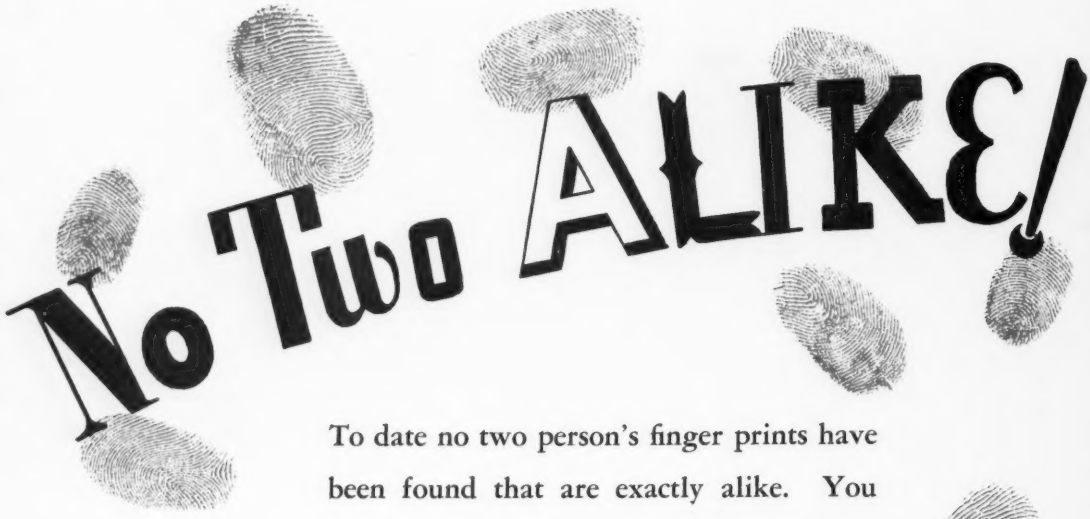
Alkalies and Chemical Products Manufactured by The Solvay Process Company

40 RECTOR STREET • NEW YORK, N. Y.

BRANCH SALES OFFICES:

BOSTON • CHARLOTTE • CHICAGO • CINCINNATI • CLEVELAND • DETROIT
NEW ORLEANS • NEW YORK • PHILADELPHIA • PITTSBURGH • ST. LOUIS • SYRACUSE

PLANTS LOCATED AT: SYRACUSE, N. Y. • DETROIT, MICH. • HOPEWELL, VA. • BATON ROUGE, LA.



To date no two person's finger prints have been found that are exactly alike. You can almost say the same thing about soap products. Our aim is and will always be to turn out a product that will do its required work at least a shade better than the "run of the mill" material. Or maybe it is just a coincidence that jobbers report more repeat business with AMPION products.

Try us. Won't you? You have everything to gain, nothing to lose.

PRODUCTS

Liquid Soap Dispensers
Liquid Soaps and Bases
Oils, Soaps and Liquids
Disinfectants
Insecticides
Waxes and Polishes
Deodorizing Blocks
Containers

And Allied Products

AMPION CORPORATION

4-88 FORTY SEVENTH AVE.
LONG ISLAND CITY, N. Y.

A HANDFUL OF CLEANLINESS!

OUTSTANDING among the more modern detergents General Chemical Company manufactures for soap and detergent makers, is Sodium Metasilicate. As a cleansing compound it offers these important advantages:

1. UNUSUALLY EFFECTIVE "WETTING" AGENT . . . More than most cleansing agents, Sodium Metasilicate has the ability to break down the surface tension of water. This promotes and speeds the cleansing process by enabling the cleansing solution to get "under" grease and dirt.

2. A HIGH pH . . . A "BUFFERED" CLEANSER . . . Alkalinity is recognized as one measurement of a cleanser's effectiveness. Not only has Metasilicate an extremely "high pH" for effective cleansing, but in addition, it has an inherent "buffering" action which permits additional reserves of alkali to be released as equivalent amounts are used in the cleansing process. Metasilicate, therefore, tends to prevent unnecessary causticity of the cleansing solution—yet aids in maintaining necessary alkalinity over long periods of time.

3. BACTERICIDAL PROPERTIES . . . Sodium Metasilicate not only exerts a definite bactericidal action, but being an excellent emulsifier, it also removes the dirt in which bacteria breed.

4. SUSPENDS DIRT . . . REMOVES SCALE . . . One of the highly desirable characteristics of Sodium Metasilicate is its ability to hold dirt in suspension once this dirt is picked up. This facilitates rinsing and insures maximum cleansing. In machine washers, Metasilicate tends to loosen and remove scale so that it is readily washed away.

5. SOFTENS WATER . . . Where water has not been previously softened, Sodium Metasilicate, by precipitating calcium and magnesium salts, and by converting bicarbonates into carbonates, softens hard waters.

6. ECONOMICAL . . . Used with soaps, Sodium Metasilicate builds up their penetrating and emulsifying powers, enables them to carry more dirt in solution and improves their overall efficiency.

Sodium Metasilicate is but one of the many detergents made by General Chemical Company.

• • •

Tetrasodium Pyrophosphate, Trisodium Phosphate and Porofos* are also on General's long list of chemicals for the soap and other industries. It will be worth your while to investigate not only these and other General Chemical products but also the broad service facilities available to all users of General Chemical products. Send this coupon today!

*Reg. U. S. Pat. Off.

AIR MAIL THIS COUPON TODAY!

GENERAL CHEMICAL COMPANY
40 Rector Street, New York, N. Y.

I am interested in the following General Chemical products:

☐ Sodium Metasilicate ☐ Trisodium Phosphate
☐ Tetrasodium Pyrophosphate ☐ Porofos
☐ I have not yet received your 148 page book "Products of General Chemical Company"

Name.....

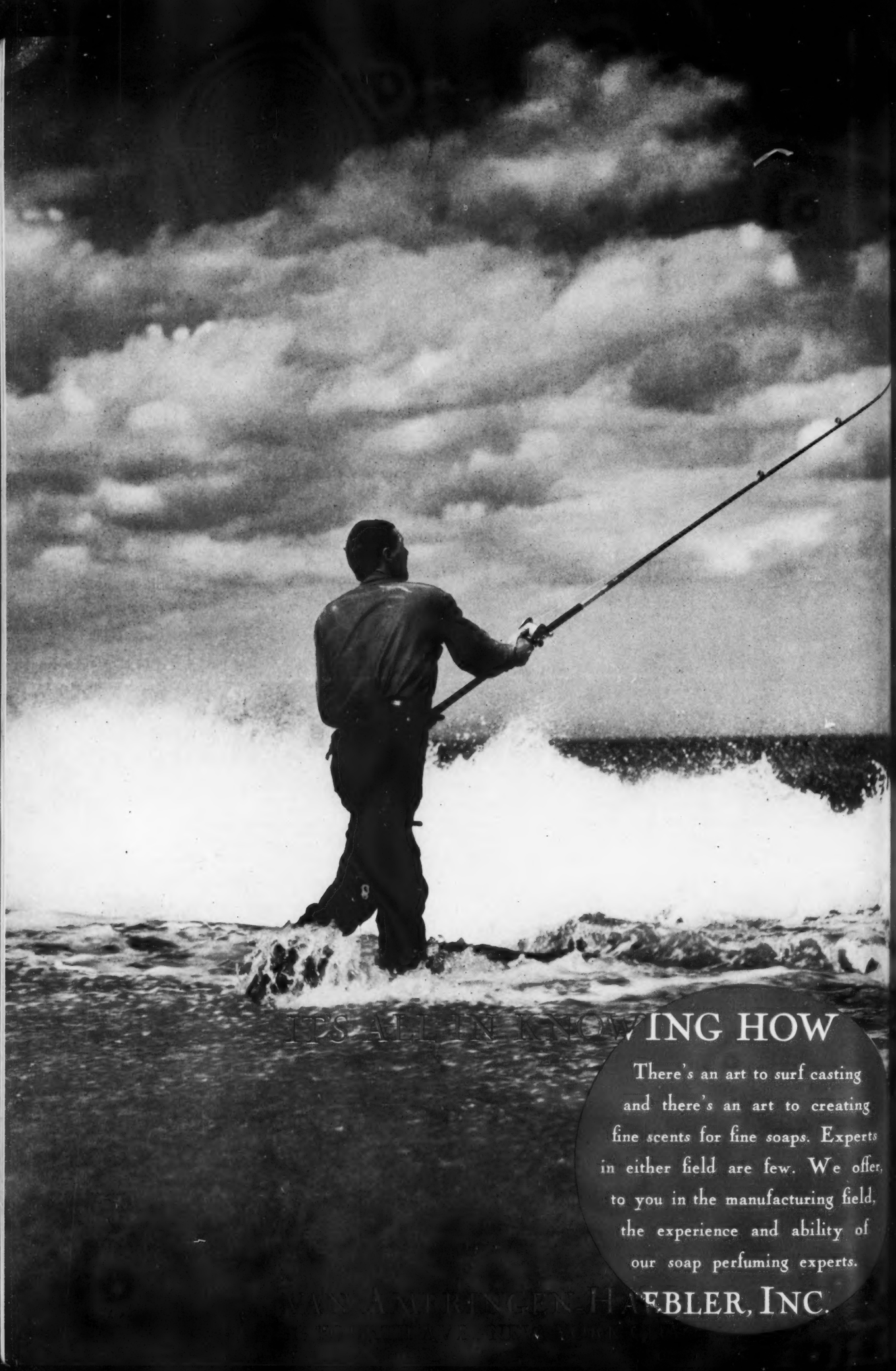
Company.....

Street.....

City.....*State*..... 8-840

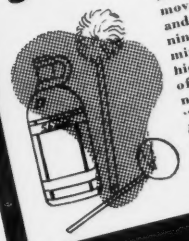
GENERAL CHEMICAL COMPANY
40 RECTOR STREET, NEW YORK, N. Y.

Sales Offices: Atlanta • Baltimore • Boston • Buffalo • Charlotte (N.C.) Chicago • Cleveland • Denver • Houston • Kansas City • Milwaukee Minneapolis • Montezuma (Ga.) • Newark (N. J.) • New York Philadelphia • Pittsburgh • Providence (R.I.) • St. Louis • Utica (N.Y.)
Pacific Coast Sales Offices: San Francisco • Los Angeles
Pacific Northwest Sales Offices: Wenatchee (Wash.) • Yakima (Wash.)
In Canada: The Nichols Chemical Company, Limited
Montreal • Toronto • Vancouver


IT'S ALL IN KNOWING HOW
There's an art to surf casting and there's an art to creating fine scents for fine soaps. Experts in either field are few. We offer, to you in the manufacturing field, the experience and ability of our soap perfuming experts.
VAN AMRINGE HAEBLER, INC.

LOOKING FOR NEW MONEY MAKERS? SELL THESE SPECIAL PURPOSE CLEANERS

SKROOT



A new scale and rust remover that cleans bowls and urinals with lightning speed. Free bowl mirror shows prospect hidden scale under rim of bowl. This dramatizes need for SKROOT. "Once over" with *handy bowl mop* (free with each quart bottle) removes scale and clinches the sale.

D T HEAVY DUTY CLEANER

This cleaner removes down trodden grease, grime, oil where other cleaners fail. Yet it is harmless to hands, clothing and good paint. Cleans by emulsifying and solvent action. Surpasses all heavy duty cleaners submitted for impartial laboratory test.

DRAIN PIPE SOLVENT

A new type *drain pipe solvent* with new penetrating agents that dissolve hard grease and other usual obstructions in record time. Its faster working action shows up on demonstration and wins you scores of hard-to-sell prospects.

OPALIUM

The standard cleaner for washing dishes by machine. Leaves dishes sparkling clean. No scum or deposits remain. Keeps machine and parts clean. Opalium is excellent for silverware. It has a score of other uses. Your trade wants a better dishwashing powder. Opalium is the answer.

Makers of Superior Sanitary Products for Progressive Jobbers.

CLEANERS
DISINFECTANTS
SOAPS
DEODORANTS
DEODORANT BLOCKS
INSECTICIDES
POLISHES
WAXES

SHARE THE SENSATIONAL REPEAT VOLUME REPORTED BY HYSAN JOBBERS

These 4 *sales getters* are capturing more new customers, more "come again" sales than any special purpose cleaners on the current market. Each cleaner is the *quality king* in its special field. Each does a better job of work—gives your salesmen more WANTED features to talk about and PROVE UP . . . *Add these lively new money makers to your line.* Sell many buyers you couldn't sell before. Enjoy increased mark up, enhanced prestige—*new revenue.* Samples, prices on request.

HYSAN — SHIPS IT FASTER

HYSAN

MANUFACTURING CHEMISTS

PROTECT YOUR LABEL WITH HYSAN QUALITY

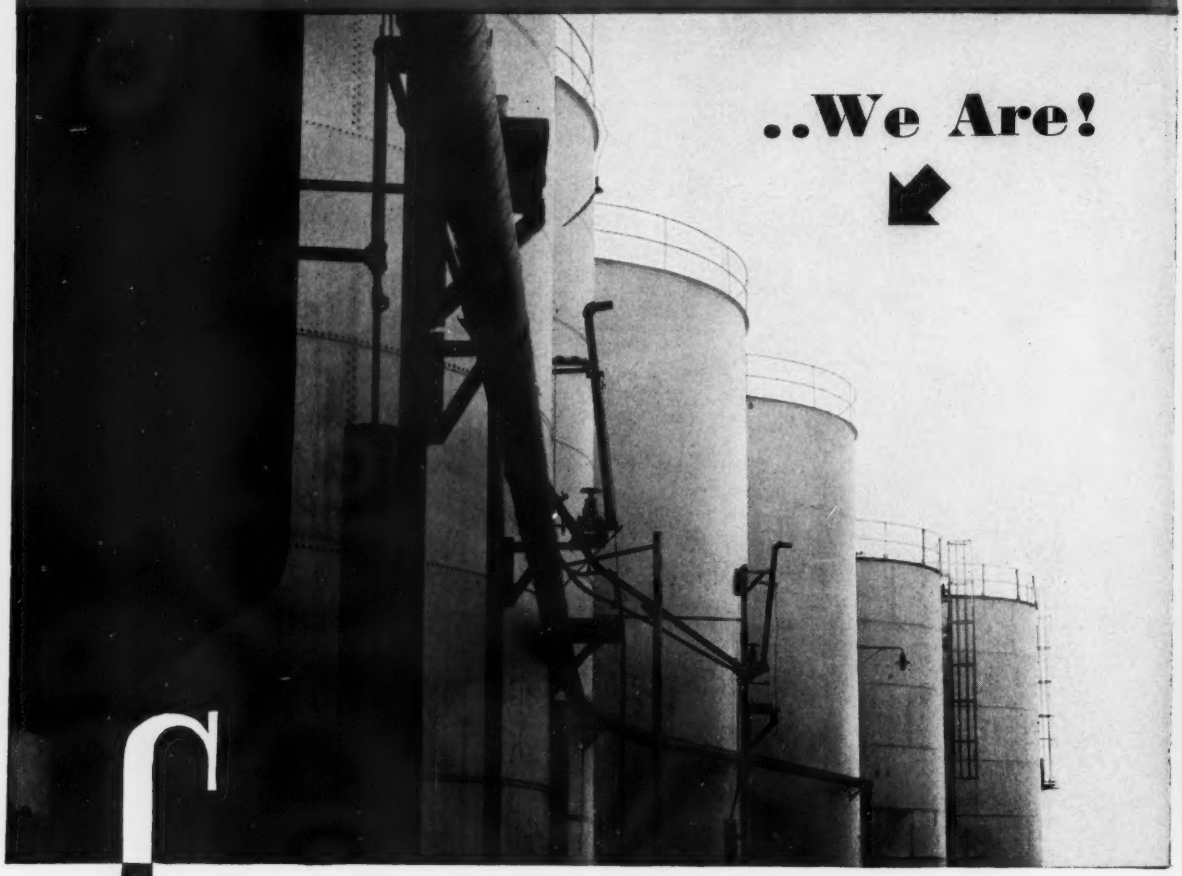
HYSAN PRODUCTS COMPANY · 2560 ARMITAGE AVENUE · CHICAGO, ILL.

HYSAN PRODUCTS CO.
2560 Armitage Ave., Chicago
Send Samples, Data and Prices.

☐ Skroot ☐ D T Heavy Duty Cleaner
☐ Opalium ☐ Drain Pipe Solvent

Firm .....
Street .....
City ..... By .....

Are You *Alert* to this *Producer* Responsibility?



Changing events require foresight and provision for an unknown future. Industry today seeks sources of supply that will be stable and adequate to meet sudden and extraordinary needs. COLUMBIA believes that one of its responsibilities as a producer of basic raw materials is to maintain stocks on hand adequate for any emergency. Here you see some of the giant storage tanks for our factory stock of 50% and 73% COLUMBIA LIQUID CAUSTIC SODA. This is just one of the responsibilities COLUMBIA accepts as a better source of supply for Caustic Soda, Soda Ash, Bicarbonate of Soda, Liquid Chlorine and other Chemicals. A good supply of all COLUMBIA Products is constantly maintained at the Barberton, Ohio plant and in distributors' stocks throughout the U.S.

COLUMBIA

SODA ASH • CAUSTIC SODA
LIQUID CHLORINE
SODIUM BICARBONATE
CALCIUM CHLORIDE
CALCENE & FILLER
MODIFIED SODAS

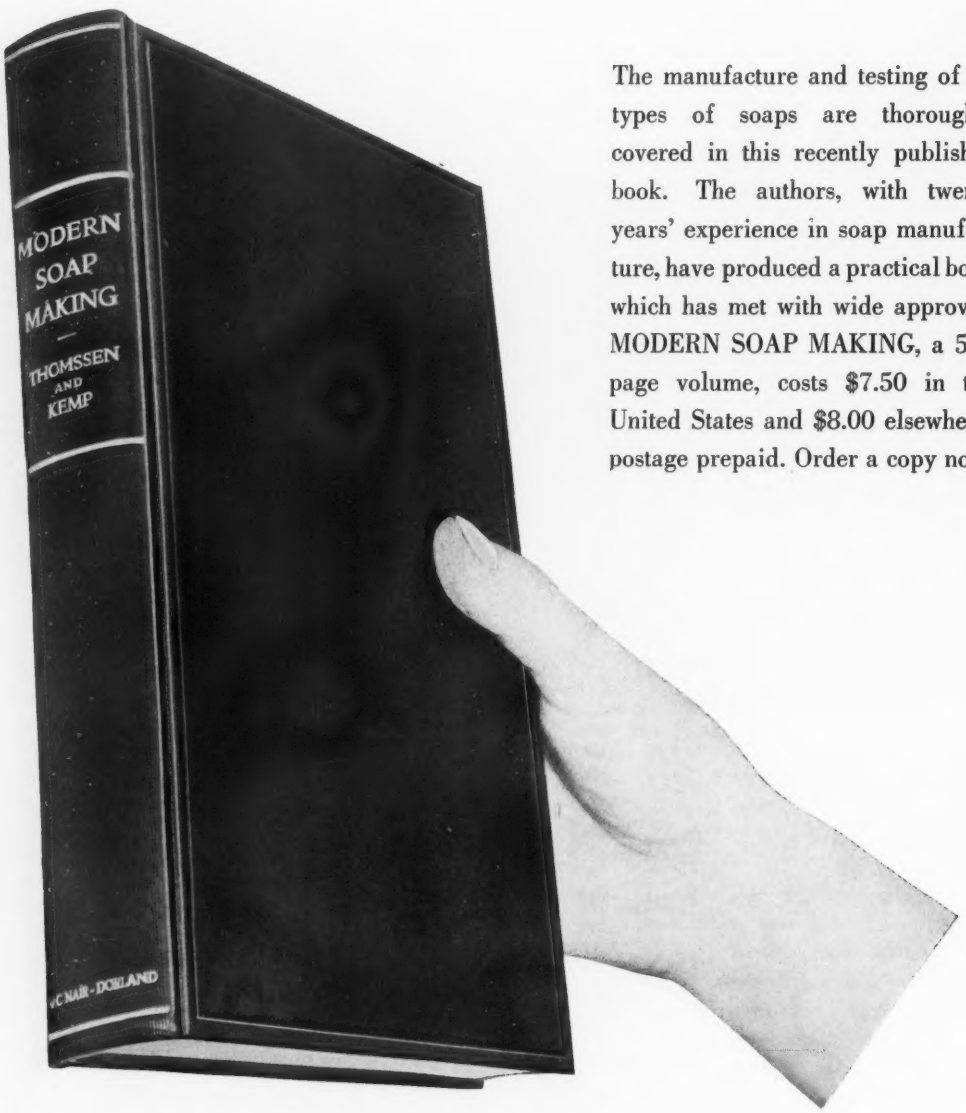
THE COLUMBIA ALKALI CORPORATION
EXECUTIVE SALES OFFICES: 30 ROCKEFELLER PLAZA, NEW YORK, N. Y.
Plant: Barberton, Ohio
CHICAGO • BOSTON • ST. LOUIS • PITTSBURGH • CINCINNATI • CLEVELAND • MINNEAPOLIS • PHILADELPHIA

"Two cans may look alike as two peas in a pod. But sometimes they're not. I found that out in working with the engineering and research personnel of American Can. Those people have saved me a lot of mistakes on our packaging problems. Believe me, I'm mighty glad we've got an outfit like this to shoulder such responsibility. And besides *that*, American Can helps us keep down our container inventory. They're a big company and always ready to ship containers *when* and *where* we need them. You *bet* there's a difference in cans . . . just as big as the difference in the companies that make them."

CANCO

AMERICAN CAN COMPANY, 230 PARK AVENUE, NEW YORK, N. Y.
104 SO. MICHIGAN AVE., CHICAGO • 111 SUTTER ST., SAN FRANCISCO

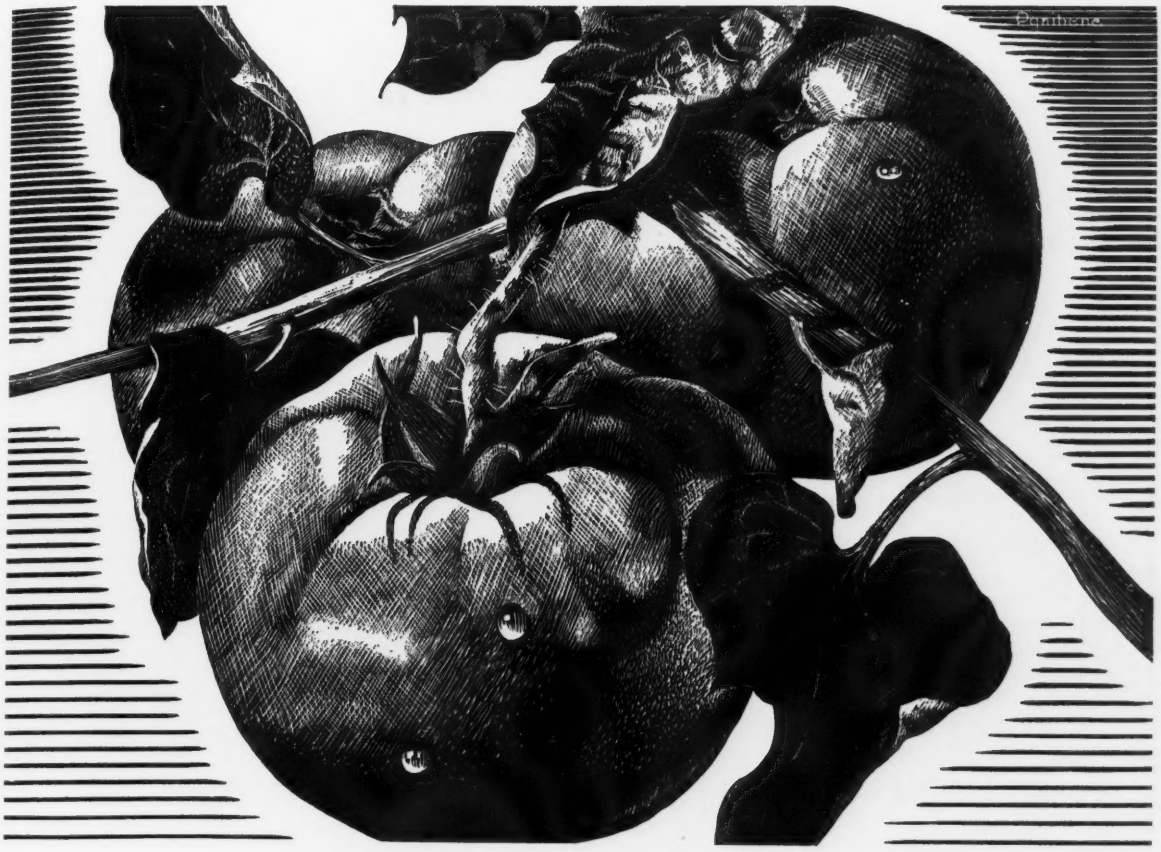
Every soap manufacturer needs a copy of this book!



The manufacture and testing of all types of soaps are thoroughly covered in this recently published book. The authors, with twenty years' experience in soap manufacture, have produced a practical book which has met with wide approval. MODERN SOAP MAKING, a 540 page volume, costs $7.50 in the United States and $8.00 elsewhere, postage prepaid. Order a copy now.

MAC NAIR-DORLAND CO., *Publishers*

254 WEST 31st STREET NEW YORK CITY



Nurtured in Rich Soil

Farmers value rich soil for the good yield it produces. And manufacturers value good basic materials for the good factory products they make possible. Many manufacturers have won consumer recognition and acceptance for their products with the help of Niagara materials — Carbonate of Potash, Caustic Potash and Caustic Soda. Let your product be nurtured in the "rich soil" of Niagara materials.

Niagara ALKALI COMPANY

60 EAST 42nd STREET, NEW YORK, N. Y.

Affiliated with Electro Bleaching Gas Company, Pioneer Manufacturer of Liquid Chlorine

PARA
CAUSTIC SODA
CARBONATE OF POTASH
CAUSTIC POTASH

If It's a QUESTION of PERFUMING...

For LIQUID SOAPS

MM&R L.S. Perfume Oils dissolve clearly without filtration in soap solutions even as dilute as 15%.

BLUEBELL L.S.
AGMERE L.S.
LILAS BLANC L.S.

For TOILET SOAPS

From an extremely wide selection of fine perfume oils, we select these favorites.

COLOGNE DMG
LUXOR BOUQUET
FLORIDA WATER

For SHAMPOOS

The three odors listed below have a high rating in our odor appeal performance test.

EAU de COLOGNE S
PALMA BOUQUET
MANHATTA BOUQUET

For HAND PASTE

Economy is the keynote. MM&R substitutes for expensive Oil Citronella and Sassafras do their job well.

FORM-O-SASS } Substitute for
FORM-O-SASS No. 3 } Sassafras Artificial
ANDRO—Substitute for Oil Citronella

For LAUNDRY SOAPS

MM&R specially compounded substitutes cut perfuming costs without sacrificing quality or odor personality.

JERALE—Substitute for Oil Citronella.
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As the Editor sees it..

WHAT will the rearmament program mean to the soap industry? This question was asked of several soap manufacturers, and they were in agreement in answering "nothing." But we wonder if it's as simple as this, and if the numerous developments which may come from the expenditure of some billions of dollars by the Government over the course of the next year or two may not also affect the soap industry.

The spending of government billions, even though they be but a comparatively small part of the total expenditures of the nation for labor and materials over the same period, is bound to have some effect on prices. Such influence is certain to be inflationary, the degree determined by other conditions existing at the time. The tendency will be to boost payrolls, boost prices generally, and most certainly to exert a bullish effect on raw materials of all kinds.

Knowing, as we do, that there is no shortage of raw materials for soap manufacture, and that there is not likely to be any scarcity, we must nevertheless bear in mind that any general upward surge in commodity prices may carry oils and fats along with it. After all, oils and fats are basic commodities in the economy of the nation, and they cannot stand aside while the economic tide runs by. They must be a part of it.

As for soap consumption, we feel that increased payrolls will have a direct bearing on the use of soap, possibly expanding it quite materially, as was the case in the giddy days of the late twenties. So, we do not believe that the potential effects of rearmament can be dismissed with a mere word, "nothing." It is our guess that more soap will be used and that soapers are going to pay more money in one way or another for raw materials and manufacturing costs.

HAVING recently checked into the subject of soap dispensers, their distribution and use, we find them classified in the trade generally as a necessary evil. Even the dispenser manufacturers admit that were their devices not essential in dispensing powdered and liquid hand soaps in public places, everybody would be tickled to death to be rid of their installation, maintenance and use. But they are necessary, and the problems which attend them cannot be sidestepped.

Most soap dispensers are sold solely as a means to an end,—that this or that manufacturer may sell and continue to sell his liquid or powdered hand soaps. Because in many cases the cost of dispensers is an obstacle to the initial purchase and use of liquid and powdered soaps, it is only natural that a great deal of emphasis is laid on cheapness. And there we have the cause of probably ninety per cent of soap dispenser troubles today.

That the trade is in need of a strong campaign against cheap dispensers, is quite apparent. Although the completely foolproof dispenser does not exist, the difficulties arising from the better quality types are extremely few compared to those which come from the cheap varieties. Those soap manufacturers and distributors who de-

mand these very cheap dispensers, and honestly believe that they are compelled to do so by competitive conditions, are mainly responsible for present conditions, — but they all point the finger at the other fellow. Irrespective of responsibility for current conditions, cheap dispensers are hurting the liquid and specialty soap business more today than ever before.

THE fact that several billion good American dollars will be spent to bolster our national defenses, has not remained unnoticed by those who feel that they have something to sell to the Government. As a consequence, various divisions of the Army and Navy have been deluged with letters and personal visits from representatives of manufacturers of everything from gold braid to scouring powder. In Washington, they have been overrun by salesmen to the point where they have been forced to ask for help. In this, they have called upon the good offices of the Department of Commerce which through its innumerable contacts with American industry has asked said industry for the love of Pete to call off its dogs and give the Army and Navy in Washington a chance to catch their breath. They point out that there are 27 major field purchasing offices around about the country for the Navy, and 46 for the Army, and instead of going to Washington, manufacturers should lay their propositions before these field offices. The Department of Commerce has called upon trade associations and the trade press to help them pass the word along.

So, if you feel that your new scrubbing compound, and none other, should be used on the decks of American battleships, or that your soap dispensers should grace the washrooms of this or that barracks, try a local field office of the Army or Navy first. Don't go to Washington until they send for you, or you will find 888 other fellows on line ahead of you waiting to see the very official to whom you want to tell your story!

NOW is the season when the large department stores hither and yon about the country put on their semi-annual sales of soap. And, it so happens that some of these stores have been offering their sale soaps these many years as "hardwater soap." On the Eastern seaboard where the water is as soft as mush, the "hardwater soap" idea has always been a puzzle to us, especially so when we find that most of this soap is a mighty good grade of milled toilet soap. A true "hardwater soap," we have always believed, was something akin to a cold-made coconut oil soap.

A year or two ago, one of the leading stores in the East, after apparently having the soft condition of the local water called to its attention, went one up on the "hardwater soap" stores, and redesignated its sale soap as "hard and soft water soap." We thought for a while that this would burn up the other stores, and with some expectation looked forward to seeing some advertising of "hard, soft, and all-other-kinds-of-water soap." But the advertising never showed up. We kept watch in vain. And now, as another soap sale season rolls around, we note that just plain "hardwater soap" is with us again in all its pristine simplicity, ignoring completely the condition of local waters and the implied jibes of its competition.

Although most large manufacturers are quite evidently impressed by the activities of the Federal Trade Commission in the matter of questionable advertising claims, innumerable small outfits, it would seem, have never heard of the Wheeler-Lea Act. Eventually, they will hear all about it,—the hard way.

What's New in SOAP DISPENSERS?

SOAP dispensers, it seems to be generally agreed, are a never-ending source of headaches to all who have contact with them. To the manufacturers and distributors, there is the continuing problem of complaints, repairs, replacements,—made necessary in most cases by abuse on the part of the public and failure of the average porter to use even moderate care and discretion in servicing. To the porter and the dispenser user, there are the problems of the unfilled dispenser, the dispenser with the broken globe, the dispenser that gives no soap, and the one that leaks soap continually all over the sink.

"Not our biggest headache, perhaps, but certainly our most constant one," is the way one member of the sanitary supply trade summed up the dispenser problem. For one reason or another, this attitude seems to be shared by a considerable proportion of the people on the receiving end of kicks and complaints from their customers. Some buyers went so far as to disparage all types and makes of dispensers in literally unprintable blanket statements. Others seemed to be enthusiastic about one particular model while referring to all the remaining types in more or less abusive terms.

Perhaps one of the more striking facts brought out in a survey of the soap dispenser situation just concluded by a representative of *Soap & Sanitary Chemicals* was the diversity of opinions expressed by the trade. One distributor would praise the push-up dispensers and condemn the push-in and lather types; another distributor claimed he had found the lather dispensers to be most satisfactory but had no use whatsoever for the push-up type,—and so on and on. Almost everyone interviewed during the survey was found to be prejudiced against certain varieties of dispensers, —sometimes with good reason, and most of them concurred in holding that their dispenser business gave them an excessive amount of trouble. Why this is the case is a question that must be approached from a number of different angles. Like every question under the sun, this one also has two sides to it.

Obviously, if so much dissatisfaction persists among so many users of dispensers, there undoubtedly

should be well-founded reasons behind this feeling. Nevertheless, it would be unjust to assume that the fault lies wholly in the dispensers themselves or equally in each of the many varieties and makes on the market today. Some of the better and more efficient makes have suffered, perhaps, by reason of the fact that similar cheaper models of the same general type have given a bad name to that particular style of dispenser when the fault lay in the individual make of dispenser and not in the basic type.

Let us look at the soap dispenser problem critically. One of the main reasons for the existence of soap dispensers is economy. Unless a dispenser effects a saving for the user, operates effectively and with a minimum of upkeep expense, it is not doing the job for which it was designed. When it is taken into consideration that the average dispenser receives pretty rough treatment from the public, it is apparent that the construction of a dispenser which will stand up under the hard usage to which it is subjected is a large order. The manufacturer is confronted with the problem of making a dispenser in which almost any grade of soap may be used without corroding or gumming up the works. The mechanism must be simple and fool-proof, so that it will not readily leak, break or clog. If a certain amount of care is taken in maintenance of their dispensers, say the manufacturers, they should give long and efficient service. While the manufacturers have attempted to make their devices as fool-proof as possible, still keeping prices at reasonable levels, it is safe to say no mechanism is fool-proof as long as it can be broken with a sledge hammer, removed with a crow-bar or filled with products of doubtful composition. Unfortunately, things like these often happen to dispensers, especially the last, and are matters over which the manufacturer has seldom any control.

The principal objection raised against soap dispensers is that they become clogged and fail to function properly. The valves often get out of order, necessitating frequent replacements or repairs. Difficulties of this type are apparently hard to avoid, especially where an inferior grade of liquid soap is employed, or if the dispenser is not kept clean and flushed out from time to time. Whether the

liquid soap is formulated with an excess of alkali or an excess of oil, it is still liable to have an injurious effect on the valve mechanism. In the former case, corrosion will take place and the washers will be attacked, creating a tendency to leak. In the latter case, the soap usually becomes rancid and also clogs the valve until after a period of time the dispenser cannot function.

The trend today in soap dispensers of the better types is to eliminate some of these tendencies by making all moving parts, where possible, of corrosion resistant metals. Some manufacturers have done away with washers entirely, another feature designed to make the valve leakproof,—although these dispensers have not been on the market for a sufficient time to draw conclusions based on their performance in actual use.

Turning from general considerations to actual dispensers in current use, the advantages and disadvantages of each general type and the uses to which each class is best adapted can be indicated more definitely. There are, speaking broadly, two groups of soap dispensers: the less expensive models usually given to customers by distributors of sanitary supplies as an inducement to purchase soaps from them; and the more substantially constructed dispensers of higher cost which will normally give much more satisfactory service. Being more expensive, they are customarily sold to the better class of users. These two groups overlap, of course, but they represent two distinct lines of thought and action in the purchase of dispensers.

It is probably unfortunate that so much selling of dispensers has been done with the accent on price, for this has been one of the main causes of eventual dissatisfaction among customers, if not the most important basic cause. Many suppliers will give or sell their customers inferior equipment because of low initial cost in order to sell their soaps, whether or not the equipment is suitable to the buyer's needs. This is one of the chief causes of the constant headaches that go along with this sort of dispenser business. We will not attempt to describe all the old familiar types of soap dispensers which have been on the market for years and still are the most widely used. These dispensers will undoubtedly continue to represent the bulk of dispenser sales for years to come, merely because of their low initial cost if for no other reason.

SEVERAL new developments in soap dispensers have risen to prominence in recent years. The lather dispenser is one type which has been greatly improved in the past two or three years. It has produced a wave of interest chiefly on account of the economical operation claimed for it. All the makes of lather dispensers work on the same general principle, although they may differ strikingly in appearance. In this type of dispenser, a more dilute soap solution may be used than the 15 per cent solution ordinarily considered correct for liquid soap dispensers. An 8 per cent to 10 per cent soap solution is commonly employed in lather dispensers,—some users reporting that concentrations as low as 6 per cent have given satisfactory re-

sults. Also it is said that with the lather dispenser, there is less waste than in most other types of dispensers.

In use, this type dispenses a creamy lather which remains in the palm of the hand instead of running off through the fingers and being wasted as is often the case in liquid soap dispensers. There is a psychological advantage, the manufacturers say, in having the lather already formed as it drops into the hand. When liquid soap dispensers are used, the user has a tendency to take more soap into his hands than is necessary in an attempt to form the thick lather he likes. In this way soap is wasted, it is said, while in lather dispensers less soap is needed for producing the same effect.

Some users of these dispensers report that since they installed lather equipment, they have effected savings as high as 50 per cent to 60 per cent in their soap costs. Another advantage claimed for lather dispensers is that persons washing their hands with the dispensed lather do not get chapped hands as easily as they do when constantly using liquid soap of stronger concentration. This claim is based on the theory that the lather does not penetrate into the skin as much as liquid soap, that the lather represents much less actual soap and is thus more easily rinsed off, and little or no soap remains on the skin where it would cause irritation and chapping, especially in cold weather. This claim, while it has a convincing ring to it, might be difficult to support with clinical evidence.

Lather dispensers are made in several styles. Because the valves must measure simultaneously a definite quantity of air as well as a definite amount of soap solution, they are necessarily more complicated than other kinds of dispenser valves. When dispensers of this type were first put on the market five or six years ago, the valves were the weak spot and were constantly leaking or getting out of order in some other way. More skillful designing and better materials used in the newer styles have improved the valve mechanism considerably.

One style of lather dispenser of the push-in type has a glass reservoir below the spout, protected by a chromium-plated case in which slots are cut so that the level of the soap solution is visible. Since the soap spout is above the level of the liquid, this style cannot leak or drip. It has no loose or removable parts to be stolen and a special key must be used to open the locked cap for filling. Concealed screws fasten it to the wall to discourage theft and breakage. This style is also available with an unprotected glass globe for use in places where there is less danger of breaking. The valve is made of stainless steel. One distributor, when questioned about this model, said the valve was too complicated,—too many parts too get out of order, which was his objection to it. He added that of all kinds of dispensers, he had had the least trouble with the simple old-fashioned push-up type.

Another lather dispenser is made with a fancy modernistic case of cast iron with a colored vitreous enamel finish. The stainless steel push-in valve is at the bottom of the case in this model. Still a third style, which has recently been improved in construction, has a push-down pump at the top, a chromium plated reservoir of unusually large size and, like the style first described, cannot leak. All moving and exposed parts are made of corrosion-resisting metal. This is one of the foremost advantages of the higher-priced dispensers as compared to the cheap die-cast metals of which the lower priced dispensers are made. Another style of lather dispenser has a gravity valve of unique design. A stainless steel cable inside the push-in piston works

(*Turn to Page* 109)

SYNTHETIC FATTY

By Dr. F. Wittka[1]

Zurich, Switzerland

IN 1939, Germany produced 40,000 tons of fatty acids by the oxidation of paraffin and in 1940 will probably produce somewhere in the neighborhood of 60,000 tons. The production of fatty acids from paraffin now replaces about 15 per cent of Germany's fat importations, or approximately 20 per cent of its requirements of fatty acids for soap-making. These figures demonstrate that, from the technical point of view, the main problems of manufacturing fatty acids from paraffin have already been solved. There remain a few problems of secondary importance yet to be solved. The synthetic fatty acids now being produced are practically pure saturated acids containing only small quantities of unsaturates, and thus are not altogether identical with fatty acids obtained from natural fats which contain relatively high percentages of unsaturated acids. One of the remaining problems, then, is to prepare by synthesis also the unsaturated fatty acids of the oleic acid type[2]. Another problem lies in the low yield of the process, nearly 20 per cent of the weight of the paraffin being lost completely as other oxidation products[3]. The low molecular weight fatty acids produced in this process represent an appreciable loss, for up to the present time, only very limited use has been made of them.

The raw materials used in the German process are synthetically made paraffins prepared from watergas by the Fischer-Tropsch process[4]. Although the Fischer-Tropsch method normally yields only about 10 per cent paraffins, when it is carried out under a pressure of 15 atmospheres, the paraffin yield can be increased to 50 per cent. Under this condition, the synthesis can be used to produce paraffin economically for the manufacture of fatty acids. The non-paraffinic by-products of the Fischer-Tropsch process are hydrocarbons of low molecular weight including naphthas, light mineral oils, etc.

The crude paraffin-wax obtained by synthesis is a mixture of the straight-chain hydrocarbon homologues of a great range of molecular weights. For the oxidation to fatty acids, the hydrocarbons must be separated by fractional distillation as the higher and lower fractions cannot be utilized in soap making[5]. The most desirable fraction for oxidation contains the paraffins from $C_{18}H_{38}$ to $C_{28}H_{58}$ with an average molecular weight of 284. These hydrocarbons when oxidized yield fatty acids with an average molecular weight of 214, corresponding to fatty acids of the formula $C_{13}H_{26}O_2$, that is, a molecular mixture of lauric acid, $C_{12}H_{24}O_2$ with myristic acid, $C_{14}H_{28}O_2$. This fraction of hydrocarbons has an initial boiling point of over 350° C. Some of the paraffins formed by the Fischer-Tropsch method have molecular weights as high as 8,500, corresponding to the formula, $C_{600}H_{1202}$. These can be used for other purposes but they are of no use in the synthesis of fatty acids for the acids so formed make soaps lacking lathering power.

The fraction of the paraffins used for oxidation is white, very soft, more liquid than lard and smells of low fatty acids which are formed during the synthesis. These fatty acids are present in only small quantities, approximately 0.1 per cent. This

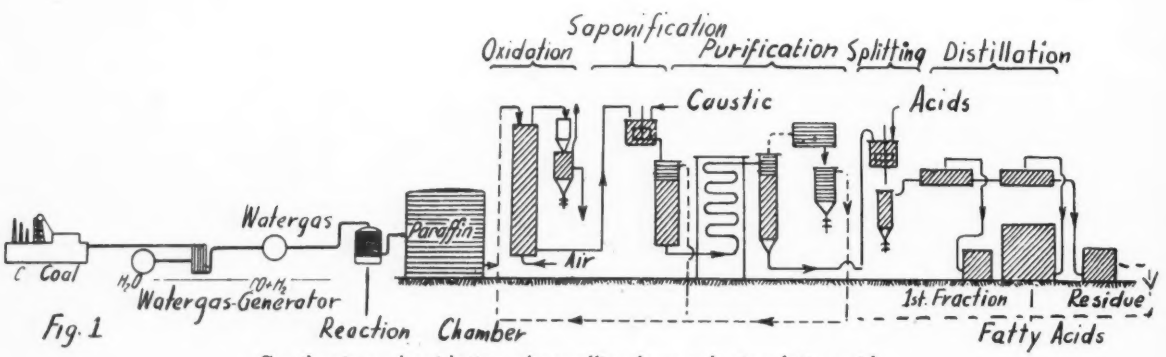


Fig. 1

Synthesis and oxidation of paraffins for producing fatty acids.

TY ACIDS

soft white fraction is commonly called Fischer-Gatsch.

The chemical reactions of the oxidation are not yet definitely known but it seems evident that the first reaction consists in the interpolation of one oxygen molecule between the carbon and hydrogen atoms of one of the CH_2 groups of the paraffin molecule.

$$R{-}CH_2{-}CH_2{-}CH_2{-}R + O_2 \rightarrow$$

$$R{-}CH_2{-}\underset{\displaystyle O\\ \displaystyle O\\ \displaystyle H}{\overset{\displaystyle H}{\overset{|}{\underset{|}{C}}}}{-}CH_2{-}R$$

This equation seems to be correct as it was found that the binding power between C and C is stronger than that between C and H[6]. The peroxides formed as the first product of oxidation are unstable and break down to form aldehydes and alcohols which are in turn oxidized further and converted into fatty acids[7].

$$R{-}CH_2{-}\underset{\displaystyle O\\ \displaystyle O\\ \displaystyle H}{\overset{\displaystyle H}{\overset{|}{\underset{|}{C}}}}{-}CH_2{-}R \rightarrow$$

$$R{-}CH_2{-}\underset{\displaystyle OH}{\overset{\displaystyle H}{\overset{|}{\underset{|}{C}}}}{-}O{-}CH_2{-}R \rightarrow$$

$$R{-}CH_2{-}CHO \rightarrow R{-}CH_2{-}OH$$

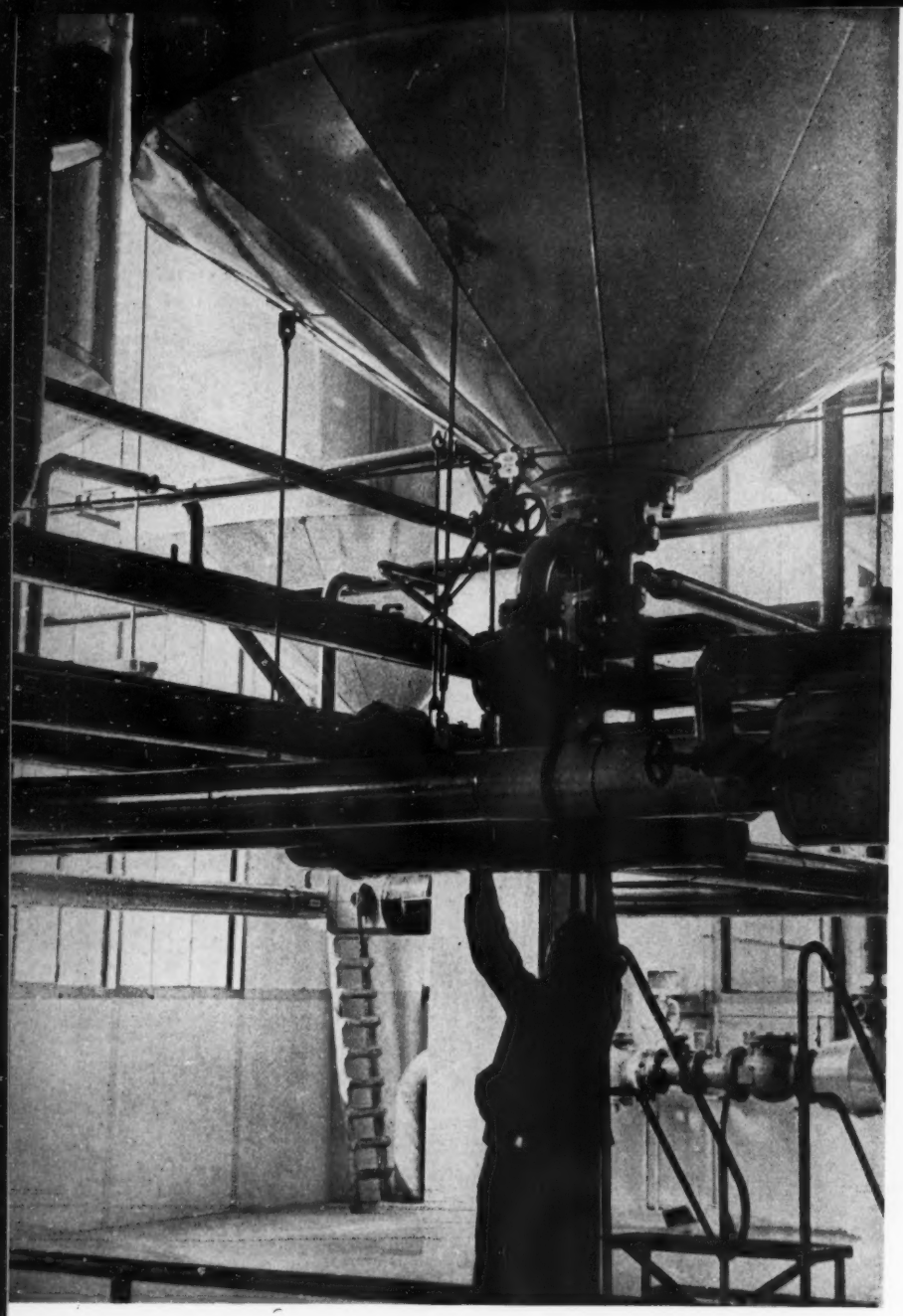
$$2R{-}CH_2CHO + O_2 \rightarrow 2R{-}CH_2COOH$$

Other reactions, of course, are also possible and can be used to explain the many other oxidation products.

Since the paraffin molecule contains so many CH_2 groups, all practically identical in chemical properties, it is to be expected that the oxidation will begin not at any particular CH_2 group, but on any or every group with no regard as to position. That this is the case is verified by the fact that the fatty acids produced by this method have a large range of molecular weights. The oxidation of the Fischer-Gatsch paraffins results in the formation of all the homologous fatty acids from formic to octo-decan-carbonic-acid.

Towers for paraffin oxidation at the factory of the Deutsche Fettsaure Werke at Witten on Ruhr.

Oxidations made with pure hydrocarbons have given the same results as mentioned above. Trial oxidations made using normal decane, $C_{20}H_{42}$, yielded a mixture of fatty acids containing from one to 20 carbon atoms. It is interesting to note that the CH_3 groups are attacked to only a very slight degree and thus fatty acids of the same chain length as the original hydrocarbons are found only in small percentages. This confirms the theory that the oxidation takes place principally at the CH_2 groups. The practical application of this fact is, that to produce fatty acids of a certain molecular weight, it is necessary to start with paraffins hav-



Lower section on kettle in which fatty acids are separated from unsaponifiable material by saponification.

ing carbon chains about twice as long as these of the desired fatty acids.

Soaps made from the suitable fraction of these fatty acids are quite similar in their properties to soaps made from myristic acid, and from mixtures of tallow and coconut oil. Good commercial soaps can be made by substituting pure fatty acids from paraffin oxidation for 50 per cent of the tallow used in the formula[9].

Paraffin fatty acids can be used for making toilet soaps as well as cheap laundry soaps. Some caution, however, must be exercised in the selection of perfumes, for as is the case with soaps made from mutton tallow and hydrogenated fats, some perfumes are not stable in this type of soap.

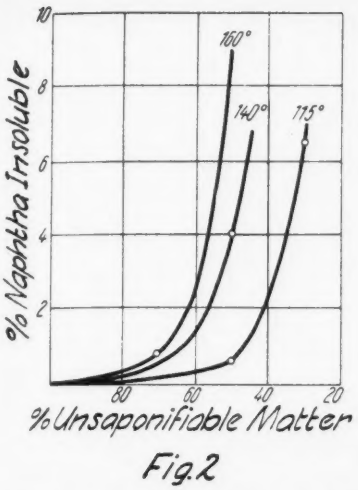
Esterification of the paraffin fatty acids with alcohols or glycerin[10] can be employed to produce glycerides equivalent in regard to their biological functions with the natural fats. When used for human consumption vitamins should be added[11].

The economic value[12] of preparing fatty acids by the oxidation of paraffins depends, of course, on the balance between the prices of natural fats and paraffins and their relative availability. Under normal market conditions, such as existed in Germany before 1914, the costs of making fatty acids from paraffins made the final price too high to compete with the natural fats. But under conditions when the natural fat supply is curtailed, as it is, for example, in Germany and England[13] at the present time, the method of preparing synthetic fatty acids may be of great commercial value. Or if the price of paraffins should be sufficiently low even when natural fats and oils are readily available, this method may be commercially possible. Whereas in most countries the price of paraffin is excessively high, sometimes higher than the natural fats, in the United States it may some day be found feasible to convert paraffins into fatty acids rather than using them principally as cracking stock in the production of gasoline. Since the United States is the largest producer of paraffins as a by-product in the refining of high grade lubricating oils, and imports large quantities of coconut oils and other natural oils, it may be that some day an appreciable part of these imports will be replaced by synthetic fatty acids from the oxidation of paraffins.

By changing the conditions of the paraffin oxidation other products and by-products of importance can be synthesized[14]. Alcohols of high molecular weight can be formed by stopping the oxidation at the proper point or by using boric acid as a catalyst or by reduction of the usual oxidation products. Di-carboxylic acids of good quality can be manufactured from paraffins by using nitric acid in the oxidation process.

THE manufacture of synthetic fatty acids follows these general steps: 1) Pretreatment of the paraffins; 2) Oxidation in the presence of catalysts; 3) Separation of the oxidation products; 4) Purification of the fatty acids.

1) *The pretreatment of the*



The Influence of Temperature in the Formation of Oxidized Fatty Acids.

paraffins:—Paraffins, natural as well as synthetic, must undergo pretreatment to make them suitable for oxidation. The synthetic paraffins are distilled to remove the hydrocarbons of too high and too low molecular weight. Practical experience indicates that hydrocarbons having a boiling point lower than 350° C. are not useful for this purpose as they yield large quantities of low molecular weight fatty acids which are valueless for soap-making. The paraffins of excessively high molecular weight yield fatty acids which make soaps of low solubility and low detergent power.

A fraction having the following composition[15] was used for oxidation:

	Per cent
Paraffins with 19 to 22 C atoms	27.4
22 to 25	31.0
25 to 27	23.7
27 to 28	11.7
Over 28	1.7

The average molecular weight of this hydrocarbon mixture is 284 corresponding approximately to the formula, $C_{20.5}H_{43}$.

As the oxidation of the paraffins normally proceeds somewhat slowly, it has been found advantageous to treat them so that the oxidation can be accelerated. This is effected most efficiently by a treatment with strong oxidizing agents such as permanganates, etc. Adding previously oxidized paraffins also has the effect of speeding up oxidation.

The procedure of pretreatment with an oxidizing agent is as follows: Approximately 0.1 per cent of powdered permanganate is added to the paraffins and they are then mixed intensively while the batch is heated up to 150° C. for 10 minutes. After this the mixture is blown with air at 99° to 102° C. The old method of pretreatment with strong acids, which was used particularly in treating natural paraffins, has been replaced by this method and since synthetic paraffins always have the same composition and are practically free from impurities, the refining of the paraffins with strong acids has become unnecessary. The chemical result of this treatment consists in the accelerated formation of organic peroxides which are the real catalysts in the oxidation.

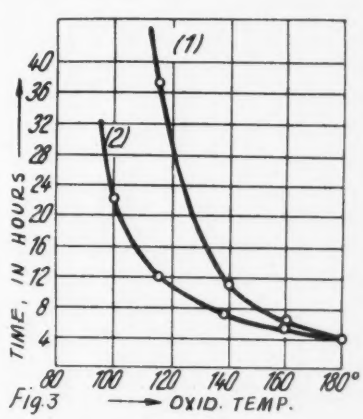
2) *The oxidation in the presence of catalysts*:—The maximum rate of oxidation takes place at 160° C. and for this reason the old processes for the oxidation of paraffins used temperatures of 160° C. and higher. But while the oxidation is very rapid at this temperature, the products are of low quality having a dark color and a disagreeable odor. Large quantities of oxidized fatty acids are formed at high temperatures resulting in heavy losses of product and the soaps prepared from these fatty acids are almost black and have a sharp penetrating odor. At low temperatures, the rate of oxidation is much slower and consequently the products possess better color, odor and resistance to rancidity[16].

By using catalysts and by getting more complete contact with air, the temperature can be reduced to approximately 100° C. and also the time for effective oxidation can be considerably shortened. This method has the advantage of combining rapid oxidation with a production of light-colored fatty acids which do not have a bad odor. The diagram in Fig. 2 shows the influence of temperature on the formation of oxidized fatty acids or substances insoluble in naphtha.

The best catalysts in use at the present time for accelerating low temperature oxidation are the various salts of manganese including potassium permanganate, manganese stearate and manganese soaps of the unsaturated fatty acids, especially of the highly unsaturated fatty acids of the fish oils. The use of permanganates is usually combined with the pretreatment of the paraffins whereas the use of the other manganese salts is confined to the oxidation operation. These salts are added just before the oxidation is started and the quantities used vary from 0.5 to 1 per cent depending on the quality of the soaps.

Salts of other heavy metals can be used as catalysts, but they are not as effective as the manganese salts. Iron salts, for example, almost attain the catalytic activity of those of manganese, but they possess the disadvantage of inducing the formation of oxyacids in large quantities and consequently are seldom used. And for the same reason, iron must be excluded as a material for construction of apparatus or equipment in the oxidation plant.

The other important change necessary for oxidation at low temperatures is in the form in which the air is used. In the old-style process, the air was passed through small holes and towers filled with Raschig rings and similar fillings. The air, in passing through these bubble towers and serpentines, was divided into small bubbles. While this was good enough for the high temperature operation, it was found that such an arrangement did not provide sufficient contact at the lower temperature. The



The Influence of the Division of Air: (1) with Raschig Rings; (2) with Porous Plate. Reaction Stopped After A. V. = 80.

currently employed method of blowing air through porous plates made of cintered metal disperses the air into very fine bubbles which provide a large surface area for the oxidation reactions.

Fig. 3 shows the difference in time of oxidation for the two methods of dispersion of air: (1) through serpentines and Raschig rings and (2) through porous plates. The time of oxidation was noted when the acid value of the batch had reached 80. The graph shows that at 100 C., the time required for oxidation was only slightly in excess of 20 hours when the porous plate was used; when less finely-divided air bubbles were used practically no oxidation took place. At higher temperatures the difference became less until at 180° C. no difference was observed in time required for the two methods.

As the oxidation of paraffins is an exothermic reaction, heat is developed during the oxidation. Measurements have demonstrated[18] that approximately 500 calories are formed per kilogram of paraffin and this heat can be utilized by furnishing the oxidation towers with heat exchangers[19]. At the beginning of a run the oxidation chamber must be brought up to temperature with steam. After the reaction has started, there is a rapid evolution of heat and the chamber must be carefully watched to guard against a dangerous temperature rise.

Some of the products of oxidation are gaseous as well as volatile and non-volatile liquids. The gases formed during the reaction are carbon dioxide and, rarely, carbon monoxide. The volatile liquid products are water and low fatty acids of all kinds. Of the water-soluble fatty acids, acetic acid is the major constituent. The water insoluble low fatty acids make up from 10 to 12 per cent of the original weight of the paraffins and have an acid value of about 272 and a saponification value of about 370. These low molecular weight fatty acids are formed in large quantities, but from a commercial point of view have little value and are used in only small amounts industrially.

The non-volatile liquid products of the oxidation are the fatty acids good for making soaps and edible fats, mixed with large quantities of non-saponifiable substances

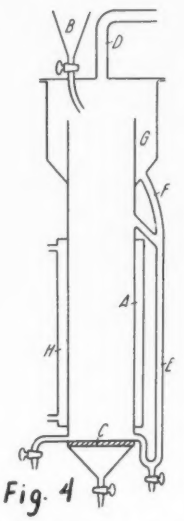


Fig. 4

Modern Oxidation Tower. German Patent 626,787, 1933; J. G. Farben.

of different compositions. Recent work on the separation of the pure fatty acids has completely solved this difficult problem and today fatty acids of high quality are being produced by the process.

Fig. 4 shows a diagram of one of the small oxidation towers that are used at the present time in the Deutsche-Fettsaure Werke. A is the oxidation tube, B is the filling funnel for liquid paraffins, C is the porous disk through which the air is blown, D is the air exhaust tube, E and F are connecting tubes, G is the enlarged chamber for recovering the foaming liquid paraffins, and H is the heating and cooling jacket. The entire space over the porous disk is filled with Raschig-rings.

Before a run, the prepared paraffin is introduced into the tower through funnel, B. Catalyst is added, air is blown through disc, C, and the batch is heated with steam until the temperature of the whole has been raised to 98° to 102° C. Then the steam is cut off and the temperature is held at 102° C. by running water through jacket, H. A check is made on the operation from time to time by drawing off samples and examining for color and acid value. The oxidation is stopped when the acid value is approximately 80. When a new stock of paraffin is being used, it is advisable to make occasional determinations of saponification value for better control over the operation. Once this has been done for any one particular stock, it is not necessary to repeat it as the relationship between acid value and saponification value is nearly constant if the conditions of oxidation are the same.

An American paraffin was oxidized at 130° C. in the presence of an acid-manganese soap and the following data were recorded:[20]

Paraffin—Bedford 122 m.p.
Quantity—150 kg.
Pretreatment—with 1% sulfuric acid 66 Be. and 0.05% $NaNO_2$.
Catalyst — 700 gms. acid - manganese soap with 50% free stearic acid.
Temperature—130° C.
Pressure—1 atmosphere.
Division of air—serpentines and Raschig-rings.
Tower—made of aluminum.

Oxidation time hours	*Acid value*	*Color*
3.5	12.3	white
8	47.0	nearly white
9	58.2	nearly white
10.5	71.8	nearly white
13	78.2	light yellow
15	81.9	light yellow

Analysis—acid value 81.9
sap. value 158.3
Unsaponifiable matter 48.2%
Oxy fatty acids..... 3.7%
Acid value 170.4
Fatty acids 48.2%
Acid value 182.6
Sap. value 216.6
Color of soaps made from fatty acids—dark yellow.

As this chart illustrates, the oxidation is usually stopped when approximately 50 per cent of the paraffins are oxidized and converted into fatty acids. At times, when light colored fatty acids are desired for making soaps having very little smell, the oxidation is stopped when only 30 or 40 per cent of the paraffins have been oxidized.

(To Be Concluded)

References

[1]Wittka, F.—Gewinnung der höheren Fettsäuren durch Oxydation der Par-

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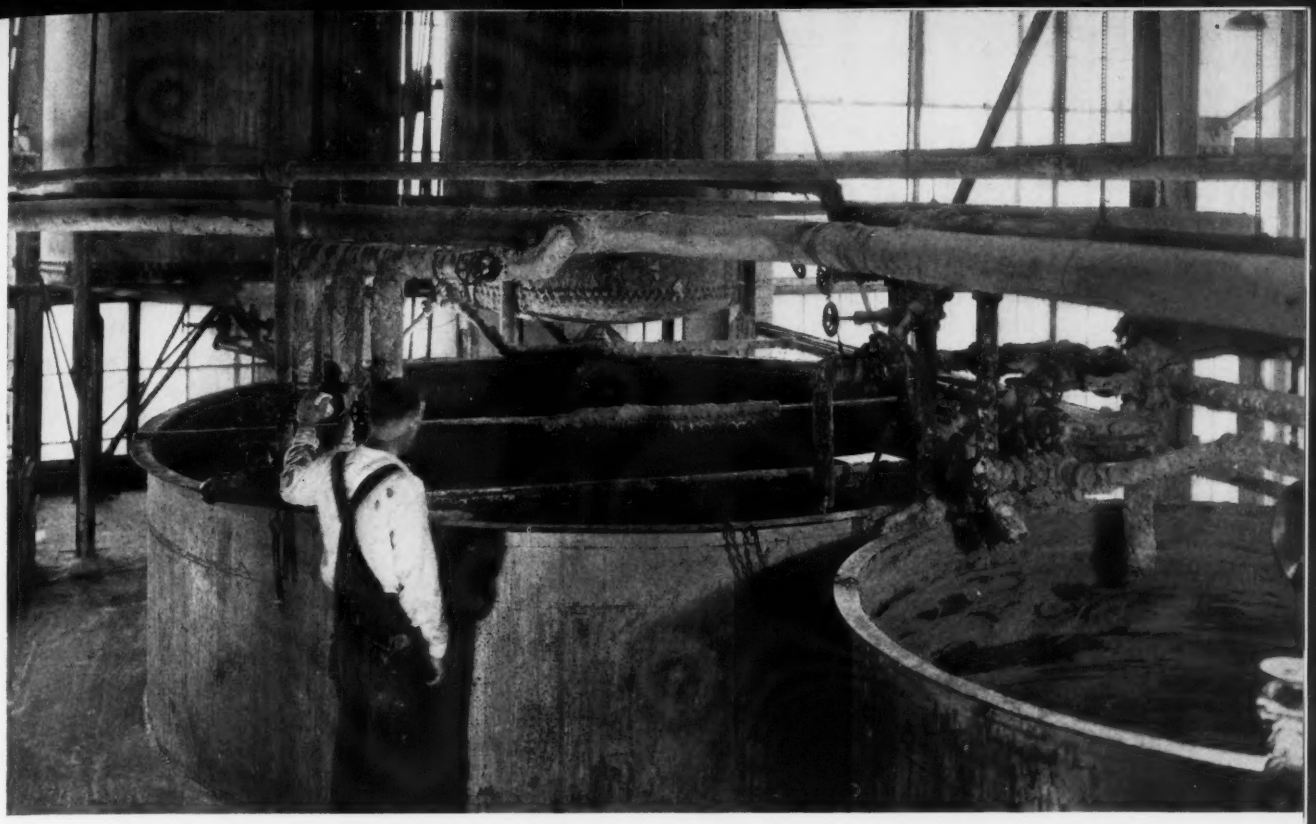

SOAP PLANT COSTS...

A study of losses, leaks, and waste in smaller soap plants, and means of reducing them

(PART II)

By J. M. Vallance

AS FAR as soap factory cost systems are concerned, it is not unusual among small manufacturers to keep accounts in some simple, restricted form that merely permits the extraction of a very crude operating account, profit-and-loss account and balance sheet. While this may well enable a manufacturer to learn the approximate result of his operations over a period of time, it is really insufficient to prevent serious leakages, and should be kept in more detailed form if maximum efficiency is to be obtained.

The first essential in any factory is the careful analysis of all expenses, including overheads, and the charging of these to the various departments concerned. The object should be to allocate charges as accurately and individually as possible, and not to lump them together under a few comprehensive headings. This is because the manufacturer will need, from time to time, to compare costs not only in the aggregate but also in each separate branch of the factory's activity. A clear, undistorted picture of the working costs of every production unit aids enormously in preventing unnecessary waste of time and labor from month to month, and year to year.

Other essential factors of a good costing system are a careful check on labor, i.e. by means of time cards, etc., and the estimation of costs and potential and actual returns. A friend of mine in the British soap industry, who is an excellent accountant, has on many occasions expressed the opinion that any manufacturer deciding to proceed only as far as estimating will be in a position to determine which lines are worthy of strong backing and which are not. A good idea can thus be obtained of those lines that it might be profitable to withdraw. And, it is important for the sales department to be zealous in the matter of estimating sales but to avoid undue optimism. The over-estimation of the sales of any one line can easily change an estimated profit into a loss.

The above views apparently apply also quite well to the American soap industry, judging from the article on "Soap Plant Costs" that appeared in the September and October issues of SOAP for the year 1933. I fully agree with the writer of that article that a soap costing

system needs to be simple enough to avoid too much labor and undue expense, but accurate enough to give a true cost picture. It must also be flexible enough to be applicable to a variety of grades and types of soap and to a diversity of manufacturing methods that differ considerably in detail. Above all, composite charges, set down for example as "manufacturing expenses," are most definitely to be avoided, as they often mask leakage or some other form of inefficiency.

If one regards the manufacturing end of a soap business as its hands, then the brain may conveniently be divided into two parts, namely the accounts department and the control laboratory. As is only to be expected, the factory is likely to operate most efficiently when these latter departments work together in perfect harmony. The quality of a soap produced should be, for example, neither below nor in excess of the standard demanded by the market. This is where the control laboratory can carry out such useful work as washing down soap tablets with alternate washes of hot and cold water in order that contraction and expansion may take place and any tendency to crack be thus exposed, and where micrometer tests may be employed to ensure that soap flakes conform with the required standard, etc.

A large Canadian soapery utilizes its highly efficient laboratory to provide much of the basic information required by the cost accounting department. Thus when a new product is to be manufactured, the research department is called upon to figure out the amounts of various materials required. Through the laboratory, the cost of manufacturing standard lines is checked by relating the amount of raw materials used to actual production yield. While the factory knows the gross amounts of materials and products, the laboratory is called upon to analyze each, since quality also enters into the equation. In checking the production of standard lines, the laboratory takes frequent samples of raw materials, and each set of samples is composited into a single sample by mixing in proportion to the amount of each sample used or produced. Then, based upon analysis of these composite samples, the cost department can figure the cost of production and account for losses during operation.

The soap plant laboratory, if properly organized, cannot only function for purposes of analysis and control of the end product at various stages of production. In addition, it can, and should study new outlets, investigate complaints, examine packaging materials, and provide costing data as previously shown.

A strict control of soap sent out in the form of samples is obviously desirable, for unless this activity is carefully watched, there is a tendency for soap sampling to become excessive and expensive. The channels in which they are distributed should therefore be subject to periodical investigation. Careful check should also be kept on packaging supplies, so that badly printed wrappers or poorly glued cartons may be accounted for and, if possible, a claim put through to the printers. All such checking should be matters of regular routine which is not the case in many small plants.

OPINION seems to be divided as to the relative advantages offered by factory control systems of the "time study" type, but various modifications of the system have certainly been installed with varying degrees of success. One such system is based on the allocation of so many units of work per hour, calculated from "time studies" of various employees. The normal number of units demanded for any given task is 60, which allows not only for actual work but also for a varying proportion of relaxation. Bonuses are paid on all totals over 60, which is an interesting point when one realizes that 80 is frequently attained, while exceptional operators can even manage 90 over short periods. The various daily results are tabulated for departmental reference, so that each operator knows at the end of every day how he or she stands. The system is designed not to provoke senseless speeding-up, but rather to stimulate the workers' interest in their jobs and offer them certain compensatory advantages.

Proper consideration of the "human element" in factory organization is desirable not alone from a humanitarian point of view. It also spells increased efficiency and stability, and reacts by no means adversely on profits. Attention must therefore be paid (however small the factory) to reducing accident risks, providing first aid and medical supervision, and ensuring an adequate degree of factory hygiene. Moreover, introduction of the five-day week has in many cases proved beneficial to employees and management alike. Overtime is obviated, additional rest assured, and a reduction effected in various overhead charges. As against all this, monotony and uncongenial, unhygienic conditions lead inevitably to slack work and a high proportion of lost hours due to illness. Cleanliness and orderly regulation of routine procedure are definite factors in favor of economy, as they save much waste of time and labor and also reduce the number of minor accidents. These are points which today are given wide attention by large plants, but are too often ignored in smaller ones.

EFFICIENT recovery of glycerine must be regarded as an important factor in making soap manufacture a profitable field of activity. After saponification has completely taken place in the soap kettle, salt is added to grain out or separate the curd from the lye. This operation effectively splits off the floating soap curd from the salt solution, but no such convenient separation of glycerine occurs, for, as we all know, this latter is dissolved not only in the free lye but also in the aqueous portion of the hydrated soap curd.

Generally speaking, there is apt to be too high a proportion of the available glycerine retained in the soap curd and thus in the finished soap, although even in the case of the

more carefully made soap, there will obviously be small losses of glycerine that cannot altogether be avoided. Dr. J. H. Wigner, in his recently published work, "Soap Manufacture: The Chemical Processes," refers to this problem in the following terms: "The amount of lye that may be conveniently produced on one change is limited, and is almost always insufficient to remove the requisite amount of glycerine from the soap. It is easily understood that if a certain total amount of lye is produced in one or more operations the amount of glycerine removed will increase with the number of changes. In ordinary cases, it is advantageous to make three or four changes, but beyond this number the gain is only trifling. If three or four changes can be given an overnight settling it is well to make that number, but little or nothing will be gained by making still more changes if this involves insufficient time for settling, as poorer separation will probably result from this, and will outweigh the advantage gained by the additional change." Much information is given by Wigner that should be of considerable assistance to the average soapmaker in recovering the optimum proportion of glycerine and consequent better return from this end of operations.

The minimum strength of lye that can profitably be dealt with naturally depends not only upon the working costs of the glycerine department but also on the prevailing market price of glycerine. In general, however, it is assumed that a lye of 2 per cent strength is about the weakest that can be treated on a strictly profit-making basis. This of course represents more efficient control than is normally to be found in soapworks practice, but it is a reasonable and by no means unduly low figure.

* * *

In conclusion, I would like to express my firm conviction that specialization offers the moderate-size soapery a better chance of continued existence and regularly maintained profits than any other single factor. If a soapmaker can turn out a product of a specialized character and of good quality, and back it with a certain amount of advertising, he stands a good chance of finding himself in a much stronger position eventually than the man who devotes his time to the conventional cut-price, highly competitive lines.

It is impossible to make specific suggestions without a definite knowledge of local market conditions, but I have seen many small factories do well on such specialities as carpet soap, "sugar" soap for paint work (containing a high proportion of alkali), special shampoos, textile and pharmaceutical soaps, dry cleaners, sanitary preparations, mottled soaps for export, oatmeal soap, etc. It can, of course, be argued that the real money in the soap business lies in the market for flake, household, toilet and powder soaps,—and, while this is largely true, I feel sure that some of the smaller makers would do well to confine their efforts to the less competitive fields, if only to the extent of a part of their total output.

Another aspect of this question of markets is the ability to ascertain and contact the less well-known points of sale. For example, some soapmakers do quite a good trade with the shipping companies, while others supply to cosmetic manufacturers, printing ink makers, and to the rubber, wire-drawing and other industries that utilize regular quantities of specially-made soaps. Specialized outlets appear to be the most attractive fields for the smaller companies, and ones wherein their operations should be rewarded with greater profits.

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A concrete suggestion is made that all the soap factories in Calcutta create a new corporation to act as a sort of holding company to direct the activities of all the participating firms. This holding company would have a central factory to manufacture all of the soap base required by its members for toilet soaps, insuring a standard quality at a reasonable price. In the case of other soaps the holding company might arrange for the splitting of oils and fats so that the members would receive fatty acids for conversion into household and laundry soaps. The parent company could install plants for glycerine recovery and refining. It could also make coöperative purchases of caustic soda, rosin, essential oils and perfumery materials.

Each member would continue to enjoy its own independent existence carrying on its operations unhampered and developing its own specialties. The exclusive function of the corporation would be to help every one of its members by cooperative efforts to the maximum extent possible. This kind of commercial enterprise is very common in Japan and has played a very important part in the foreign trade of Japan. S. G. Sastry. *Indian Soap J.* **6,** 278-84 (1940). (Ed. Note: The above suggestion was contained in a recent presidential address to the All-India Soap-makers' Assn.)

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On hydrolysis under a pressure of eight atmospheres olive kernel oil of low acidity gives products containing 90 per cent and more of fatty acids, while highly acid oils give products containing not more than 80 per cent of fatty acids. Better results are obtained by hydrolyzing with 30-35 per cent of water in the presence of 0.6 per cent of zinc oxide. A. S. Konsta. *Chimie & Industrie* **43,** 418.

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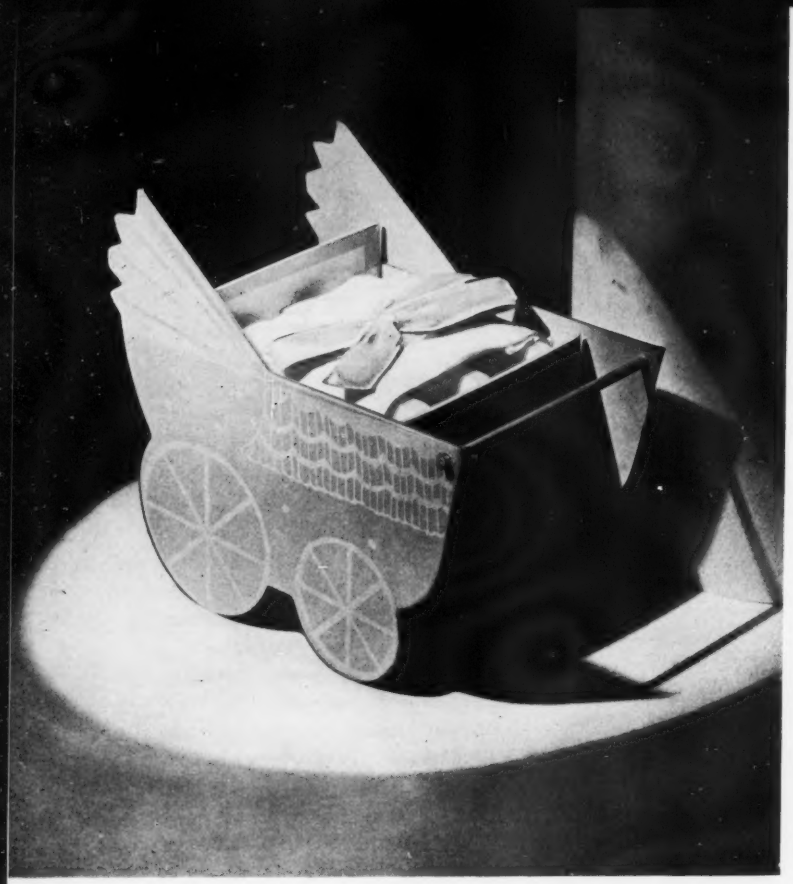
Tabulated data of the iodine numbers of 11 different Italian olive oils show excellent agreement between the Hübl and the Hanus method when allowing 15 minutes for the halogenation reaction of the oil sample with the latter method. If this period is extended to 1 hour the agreement with the Hübl method is impaired somewhat. Adoption of the Hanus method for the determination of iodine number as official is urged because of the ease of preparing and storing the solutions used and the ease and rapidity of the determination itself. B. Frenguelli and R. Travaglini. *Olii minerali, grassi e saponi, colori e vernici* **19,** 162-4; through *Chem. Abs.*

New Products and



Novel packaging of the new American "Mem" line, made in New York by Mem, Inc., is obvious in this new baby soap unit. The baby carriage motif is carried out in pink or blue.

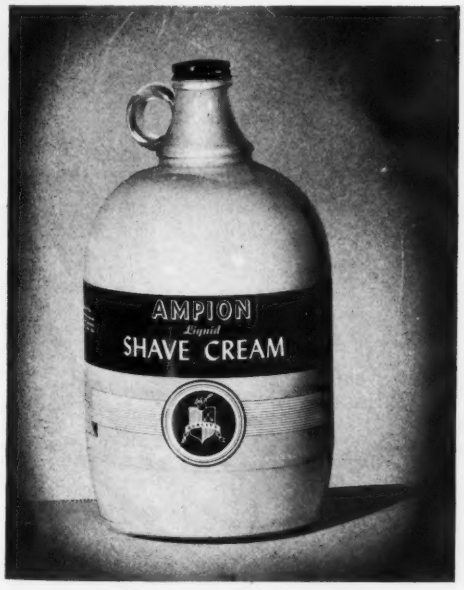
This attractive lithographed metal container serves as the package for the gallon size of a new penetrating oil concentrate, "Motor Fizik," just announced as a new product of Curran Corporation, Malden, Mass.

15 1
LIQUID CLEANING WAX
FOR CLEANING, WAXING AND POLISHING WOODWORK, FINE FURNITURE, ANY TYPE FLOORS, AUTOMOBILES AND ALL HARD SURFACES.
15 1
LIQUID CLEANING WAX
FOR CLEANING, WAXING AND POLISHING WOODWORK, FINE FURNITURE, ANY TYPE FLOORS, AUTOMOBILES AND ALL HARD SURFACES.
15 1
LIQUID CLEANING WAX

Glass containers are used by White-Sun Products Co., Kansas City, for packaging their "15 and 1" liquid cleaning wax. The line includes five sizes of glass containers as well as five gallon cans. Containers are by Owens-Illinois.

Packages

A new body shampoo for tub and shower use has just been introduced by B & L Laboratories, Chicago. It is packed in a tube and applied by means of a sponge rubber applicator.



Ampion Corp., L. I. City, N. Y., has adopted an attractive line of containers for the "Ampion" line of liquid soaps, shaving cream and shampoos. "Ampion" liquid shave, packed for barber shop, is shown.

"Royal" dry cleaner is a new product of Hecker Products Corp., Indianapolis. It is offered in a 10c size 2-oz. bottle, illustrated, also in a 30c 8-oz. lithographed tin can.

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News....

DuBois Expand Plant

DuBois Company, Cincinnati, completed twenty years in the manufacture of soaps and detergents late in June and celebrated the occasion by breaking ground for a new addition to its plant and offices on Front St., Cincinnati. The twentieth anniversary was also marked by a celebration for employes of the company at the Indian Hill estate of T. V. DuBois, president of the firm. Since the establishment of the business in June, 1920, the original plant which stood on the present location, has been completely replaced by new and modern buildings.

Push "Moonrose" Soap Sale

An intensified sales campaign for "Moonrose" complexion soap has been initiated in thirty midwestern cities by Cooter Brokerage Co., Chicago merchandise brokers, who control distribution of this product. Consumers are offered four cakes of soap plus a cellophane-wrapped wash cloth for 19 cents, obtainable at groceries. The product is a French milled type of soap, privately manufactured. It is distributed in twenty-seven states. C. L. Miller Co., Chicago advertising agency, is handling the account.

Dismiss Jergens Tax Suit

Judge John H. Druffel, United States District Court, has entered final decree and judgment dismissing the suit of the Andrew Jergens Company, Cincinnati soap manufacturers, for refund of $305,797.18, plus interest, assessed against them as deficiency excise taxes on soaps and cosmetics for the period from September 4, 1935 to April 21, 1937. He held that the plaintiffs had failed to show they had not passed on to consumers the excise taxes which they were suing to recover. Motion for a new trial was overruled. The Jergens Company took exception to both orders, and it is expected the case will be appealed to the Sixth Circuit Court of Appeals.

Manhattan Soap Enlarges Plant

An addition to the plant of Manhattan Soap Co., at Bristol, Pa., which will provide 24,000 additional square feet of floor space is now being erected adjacent to the structure now housing the company's processing department. Information has not yet been made available on what products are to be manufactured in the new building. The most modern type of equipment, however, is being installed for the processing and packaging of soap, it is said. It is expected that the new structure will be completed and in operation by the first of October. Manhattan Co. officials state that no additional workers will be needed at present.

Davison Now Bon Ami President

Alvah E. Davison, formerly vice-president and general manager, has just been elected president of Bon Ami Co., New York. He succeeds Eversley Childs who has been named chairman of the board of directors. Mr. Davison has been associated with the company for five years. Before this, he had been in advertising for fifteen years and had handled the Bon Ami account for a number of years while with McCann-Erickson, Inc., when he was asked to join Bon Ami Co. as vice-president.

Form Soap Co. in Virginia

Roanoke Soap & Cleaner Co. has just been incorporated in Richmond, Va. The corporation, formed by North Carolina interests, will manufacture, import, export and deal in soaps, chemicals and allied preparations.

Deny "Sit-Ru-Lux" Mark

Opposition by Lever Bros. Co. to registration of the trade mark "Sit-Ru-Lux" for toilet paper by Sitroux Co. led to the reversal of an earlier decision upholding Sitroux, in a recent case before the U. S. Court of Customs and Patent Appeals. The opposition was based on the similarity between the mark and the name "Lux," Lever Brothers' trade mark for toilet soap and flakes which had been registered long before "Sit-Ru-Lux." The similarity of the marks and the similarity of the goods upon which the marks are used was deemed close enough to result in possible confusion to the buying public.

Soap Employment Index Up

The employment index for the soap industry, as compiled by the U. S. Department of Labor, increased slightly in May, 1940, rising from 81.2 in April, 1940, to 81.4. (The three-year average 1923-25 equals 100.) This is appreciably above the May, 1939, figure of 78.1. The pay roll index for the soap industry for May, 1940, remained at the April level of 98.0, as compared with the index of 93.9 for May, 1939.

S. L. Abbott Co. Expands

S. L. Abbot Co., San Francisco, chemical supplies, has just completed construction of a new warehouse and office building for handling a line of supplies for the laundry and cleaning field. The new building is located at 135 King Street. The Abbot company represents a dozen or more detergent, alkali and solvent manufacturers, featuring "Playmate" brand soap made by National Soap Co., Detroit, and packages a number of items under its own brand—"Scout Brand." H. J. Cameron is manager of the laundry and cleaning supply division of the company.

Soap Industry Accident Rates

Accidents in soap manufacturing plants were reduced in frequency by 10 per cent in the year 1939 as compared with 1938 but increased in severity by 212 per cent, according to data prepared by the National Safety Council, Inc., Chicago. Out of 31 soap plants covered in the survey, representing 24,760,000 man-hours of work during 1939, there were 32,702 man-hours lost as a result of two deaths or permanent total injuries, 32 permanent partial injuries and 234 temporary disabling injuries. The frequency rate of injuries in the soap industry was 10.82 and the severity rate was 1.32 as compared with a frequency rate of 11.83 and a severity rate of 1.42 for all industries.

The frequency rate was highest among small sized soap units, 41.41, and lowest among large sized units, 7.22, while the severity rate was highest among large units, 1.53, and lowest among middle sized units, 0.35. Lever Brothers Co., Hammond, Ind., plant had the best 1939 record among large factories—1,702,000 man-hours without a disabling injury. Keystone Glue Co., a subsidiary of Elk Tanning Co., classified as a soap company in the report, had the lowest 1939 frequency rate among middle-sized units—4.51. Los Angeles Soap Co., Los Angeles, had the lowest 1939 severity rate among middle-sized units—0.07. The Pawtucket division of Consolidated Rendering Co., also classified a soap company, worked more hours without a disabling injury than any other small unit with a perfect 1939 record—120,000 man-hours.

The best all-time no-injury record for soap plants known to the National Safety Council is that of Lever Bros. Co., Cambridge, Mass., who worked from August 3, 1938 to April 3, 1939 or 2,737,471 man-hours without a disabling injury.

Conti Occupying New Quarters

Conti Products Corp., have recently acquired a new factory at 45 Clinton Ave., Brooklyn, and are now in the process of moving both manufacturing operations and offices to the new and larger quarters. It is expected that the removal of all operations from the old Brooklyn factory at 55 Eckford St. will be completed toward the end of August. The New York offices will be moved from 155 Varick Street to the new plant by the end of September. The entire Conti line of castile soap, shampoo, complexion creams and other products will be manufactured in the new plant.

◆

Chicago Golf Results

The third tournament of the golf auxiliary of the Chicago Drug and Chemical and Chicago Perfumery, Soap and Extract Associations was held on July 16, at Tam O'Shanter Country Club. Prizes were won by the following: Class A—1st, H. B. Elwell; 2nd, W. W. Scott; 3rd, T. B. Singleton; Class B—1st, W. R. Nay; 2nd, A. Van Hoven; 3rd, H. S. Lyon; Class C—1st, R. C. Jennings; 2nd, D. F. Lum; 3rd, F. D. Hildebrandt; Class D—1st, N. A. Grimm; 2nd, G. F. Pauley; 3rd, J. E. Wehmer. Guest prizes were won by C. E. Larsen, H. L. McCaleb and Dr. A. Rakob. The next tournament is scheduled for August 13 at Calumet Country Club.

◆

Low-cost Detergent

A new low-cost textile detergent has been announced by E. F. Houghton & Co., Philadelphia. The material is known as Houghton's N-25 and is recommended for scouring, dyeing, soaping-off, boiling-off, and wetting-out. The product, according to the manufacturer, has full detergent properties at all temperatures, high sudsing action and superior penetrating effect.

◆

Sample "Rinso" in Chicago

"Rinso licks Chicago's hard water" is the theme of current advertising in Chicago newspapers in behalf of Lever Bros. Company's product of that name for laundry and kitchen use. Included in the presentation is an offer of a full-size package of "Rinso" free to those who have never tried the product.

Armour Now Making Drying Oil

Armour Soap Works, Chicago, are now manufacturing a synthetic drying oil, of special interest to the paint and varnish trades, which is derived from soybean, cottonseed and fish oils. Other derivatives of the process, it is said, are useful in rubber vulcanizing, the making of lubricating greases, cosmetics and other chemical products. The process of manufacture is described as comparable to the continuous fractional distillation process in "cracking" petroleum, using fats and oils of animal and vegetable origin rather than mineral oils. Mr. Eastwood, president of the company, envisioned the day when this new by-product would free the various industries requiring drying oils from their dependence on oils of foreign origin.

◆

P. & G. Declares Dividend

Procter & Gamble Co., Cincinnati, has just declared the regular quarterly dividend of 50 cents a share on common stock, payable August 15 to stockholders of record July 25.

◆

Acquire Dutch Unilever Interests

As a result of arrangements just concluded, the whole of the United States, South American, Philippine, Belgian Congo, Chinese, Siamese, and Asiatic-Turkish interests of Lever Brothers & Unilever N. V., have been transferred to a South African subsidiary which is operating from Durban. Apart from the Dutch company's interests in France, which were acquired by the British company last year, a Netherlands Government decree has resulted in all assets of the Unilever N. V. company outside German occupied territory being vested in the Netherlands Government for the period of the war. Officials of the company who escaped from Holland at the time of the invasion say that, of the company's fifteen plants in that country, at least three have been seriously damaged. Plants in Belgium have also suffered. The principal French plants are at Marseilles, Bordeaux, Lille, Nantes, and Paris. The

company's factories in Norway and Denmark are intact. Despite most of the company's large holdings of whale oil, fish oil, and vegetable oils having been destroyed at the time of the invasion, it is thought likely that the Germans may have succeeded in seizing moderately important quantities of vegetable oilseeds.

P & G Use Survey Results

July advertising in Chicago newspapers for Procter & Gamble's "American Family Speed Flakes" tied in with results of a consumer-preference survey conducted recently among Chicago housewives. In a series of consumer interviews, the ads assert, women voted 3 to 1 for "American Family Flakes" as the soap they choose for whiteness and for washing machine use. On the count of safety, the vote, according to the advertisement, was 5 to 1 for the same P. & G. product.

Nassour Heads Cosray Co.

William Nassour has recently taken over the management of the new Cosray Co., Los Angeles, manufacturers of soap products and cosmetics. National distribution of the repackaged Cosray products will begin shortly, according to Mr. Nassour, who is also president of Courtley, Ltd., vice-president of Castilian Products Corp., and an active member in several other companies.

Harold J. Plankey Dies

Harold J. Plankey, foreign accountant for Colgate-Palmolive-Peet Co., Jersey City, died recently after a seven week's illness. Mr. Plankey was born in Carney, Mich. He became associated with the Palmolive company in 1917 and had been with the company ever since, spending six years in Australia as office manager of the company's subsidiary there and eight years in Europe as assistant to the company's European comptroller. He returned to the Jersey City plant last year and was in charge of foreign accounts. He had lived in Maplewood, N. J. since coming back from Europe.

Robert Colgate Resigns

Robert B. Colgate, has just resigned as vice-president in charge of development and research of Colgate-

Robert B. Colgate

Palmolive-Peet Co., Jersey City, according to an announcement made by E. H. Little, president. Mr. Colgate, a son of Gilbert Colgate and a grandson of the founder of the company, has been with the company for fifteen years and in charge of research since 1928. He will continue as a director.

Lever Wins $80,000 Judgment

Lever Bros. Co., Cambridge, Mass., recently won an $80,083.46 judgment against J. Eavenson & Sons, Inc., Camden, N. J., as the latest development of a prolonged case involving Eavenson's imitation of Lever Bros.' well-known "Lifebuoy Health Soap." The judgment includes both court costs and the profits realized by Eavenson from the sale of "Lifebuoy" imitations. Since 1935, when Lever Bros. Co., after a protracted trial, was granted an injunction against Eavenson restraining it from manufacturing any red carbolic soap, the case has been in and out of the courts frequently. The judgment of $80,083.46 was based on a report of Referee Joseph Kahn and approved and modified by a decision of Mr. Justice McLaughlin of the Supreme Court, New York County. J. Eavenson & Sons, Inc., were required to account for all their sales of red carbolic health soaps regardless of shape. This, therefore, included soaps of this type made by them not only in the octagonal and rectangular shapes, but also in oval and pillow shapes. The court also restrained Eavenson from using the designation, "Health Soap," on soaps having a cresylic or similar odor, and which in appearance and design were calculated to deceive the purchasing public.

Gramke To Belleville

Edward T. Gramke, secretary of the Andrew Jergens Co., Cincinnati, has gone to Belleville, N. J., to supervise completion of the company's new plant there and then serve as resident manager of the new unit. He will continue to act as secretary of the company, according to Joseph D. Nelson, vice-president.

British Italian Supplies Cut Off

British soap manufacturers will not be seriously affected by the stoppage of imports from Italy as a result of the war, according to a report from *Soap's* London correspondent. Large quantities of Sicilian lemon, orange and bergamot oils were formerly shipped from Messina, but fortunately all these articles are now produced on a substantial scale in other countries. In recent years Italian exporters have had to face increasing competition from California producers of lemon oil and West African producers of orange oil. The stoppage of exports from Bari of Italian olive oil is not a serious matter so far as Britain is concerned, it is reported, since satisfactory substitutes are available. The chief effect of Italy's entry into the war will probably be an increase in the imports of these materials from America.

P & G Building Coast Warehouse

A contract has been awarded for the construction of a new warehouse at 1601 West Seventh Street, Long Beach, Calif., for Procter & Gamble Company. The new structure will be of frame and stucco, covering an area of 155 x 164 feet, and will cost $23,500.

You couldn't recover enough iron from a ton of
WARNER TEXTILE GRADE CAUSTIC SODA
to tack this ad on the wall!
WARNER TEXTILE GRADE CAUSTIC SODA
OTHER WARNER CHEMICALS
CHEMICAL WARNER
WESTVACO CHLORINE PRODUCTS CORP

You couldn't recover enough iron from a ton of

WARNER TEXTILE GRADE CAUSTIC SODA

to tack this ad on the wall!

"Not a tack in a ton" is another way of describing the infinitesimal iron content of Warner Regular Production Grade Caustic Soda. Not only is the iron content of this electrolytic caustic soda held as low—or lower—than any caustic made by any method, but its salt content has also been reduced to a percentage that has no deleterious effect.

Yet for all its high quality and crystal-clarity, Warner Textile Grade Caustic Soda sells at regular production-grade prices. You pay no price premiums for superior results.

Warner Regular Production Grade Caustic Soda is furnished in 50%, 70% and 73% concentrations, shipped in special Warner tank cars. Why not order a car for prompt delivery?

WARNER CAUSTIC SODA

Tetra Sodium Pyrophosphate
Acid Sodium Pyrophosphate
Phosphoric Acid
Sodium Phosphates
Liquid Caustic Potash
Chlorine, Liquid
Sulfur Chloride
Trichlorethylene
Barium Carbonate
Perchlorethylene
Carbon Bisulfide
Sodium Sulfide
Bromine
Blanc Fixe
Carbon Tetrachloride
Epsom Salt
Hydrogen Peroxide
Alumina Hydrate, Light
Chemical Grade Magnesia

CHEMICAL WARNER COMPANY

DIVISION OF

WESTVACO CHLORINE PRODUCTS CORPORATION

CHRYSLER BUILDING, NEW YORK, N. Y.

To Supervise Soap Plant

W. R. Prosser, Jr., of Kirkman & Son, Inc., New York, is currently laying out plans for construction of the soap plant on Riker's Island for the City of New York which was announced last month. Construction of the plant will take 124 working days and when it is completed, Mr. Prosser will supervise its operation for a period of six months. His supervision will include the writing of all formulae for products to be manufactured; the establishment of cost systems, process control records and work schedules for operation and coordination; and instructing machine operators and institutional personnel so that they can take charge of the plant at the end of six months.

Control Italy's Soap Fats

The distribution of fatty materials for the manufacture of soaps in Italy has recently been controlled by a ministerial decree. The allotment is as follows: 85 per cent for the production of standard type laundry soap; 10 per cent to manufacturers of toothpastes, lotions, medicinal soaps, antiseptic soaps, and liquid and powdered detergents; and 5 per cent for making toilet and shaving soaps.

Runs Prize Contest

Packer Tar Soap, Inc., Mystic, Conn., is now running a prize contest in several Mid-western cities through newspaper advertising. Prizes are two $100 ensembles from two local department stores in each city and forty other smaller prizes. Contestants tell why they prefer Packer's shampoo.

Bon Ami Profits Down

Net profits of Bon Ami Co., New York, for the first half of 1940 were $681,726, equal to $3.28 a share on 94,583 shares of no par Class A stock and $1.85 each on 200,000 shares of Class B stock. This compares with net profits of $717,284 for the first half of 1939, equal to $3.47 a share on Class A and $1.94 on Class B.

C-P-P Stipulation

Colgate - Palmolive - Peet Co., Jersey City, and its subsidiary, Kirkman & Son, Inc., New York, have entered into a stipulation with the Federal Trade Commission in which they agree to desist from certain representations in the sale of soap products.

Among claims which the companies agree to discontinue are that "Palmolive Soap" contains special protective qualities not present in any other soap; is composed wholly or in part of edible olive oil or of the grade of olive oil used in bathing new-born babies; that the "soft, smooth complexions" of the Dionne quintuplets are directly the result of "Palmolive Soap," and that the use of this soap will keep the skin young or assist in any way toward nourishment of the skin. The companies also stipulate that they will cease advertising that persons who have not tested "Palmolive Soap" have based testimonials on their own professional experience.

The companies agree to cease asserting that "Palmolive Soap" is made with olive oil or that its oil or fat content is wholly or predominately olive oil. They agree to discontinue the claim that "Cashmere Bouquet" soap will remove "every bit" of dirt and cosmetics from every pore; that this soap is capable of making the skin alluring, clear or smooth in cases where such results will not be achieved by cleansing the skin; that "Concentrated Super Suds" destroys or removes all germs which "lurk in every family wash"; and that dishes washed with "Super Suds" require no wiping but will dry clean with no adhering soap film; that use of "Colgate Rapid-Shave Cream" will make it unnecessary to shave twice a day, and that use of this product results in faster or smoother shaves than can be obtained with other preparations; that most "bad breath begins with the teeth" or that a safe way to correct bad breath is through use of "Colgate's Dental Cream"; and that "Kirkman Soap Flakes" keep the hands soft and white, or that lingerie washed with this product will keep its new appearance almost forever.

Cite United Soap Co.

Lawrence L. Keller, trading as United Soap Co., Seattle, has been charged in a Federal Trade Commission complaint with misleading representations in the sale of soap. The complaint charged that Mr. Keller manufactured one soap under the trade names, "Hot Springs Mineral Soap," "Hawaiian Rose," "Velvette," and other names, advertising that they are manufactured by various companies in different localities including New York, London and Paris. All the names of such companies, the complaint continues, are fictitious, nor are his soaps imported or manufactured anywhere except at his place of business in Seattle. Claims that his soap is "vitamized" or medicated are also alleged to be untrue. It is further charged that the selling price marked on the boxes of soap is 75 cents, when, in reality, they are sold for far less.

Emery Names E. W. Reese

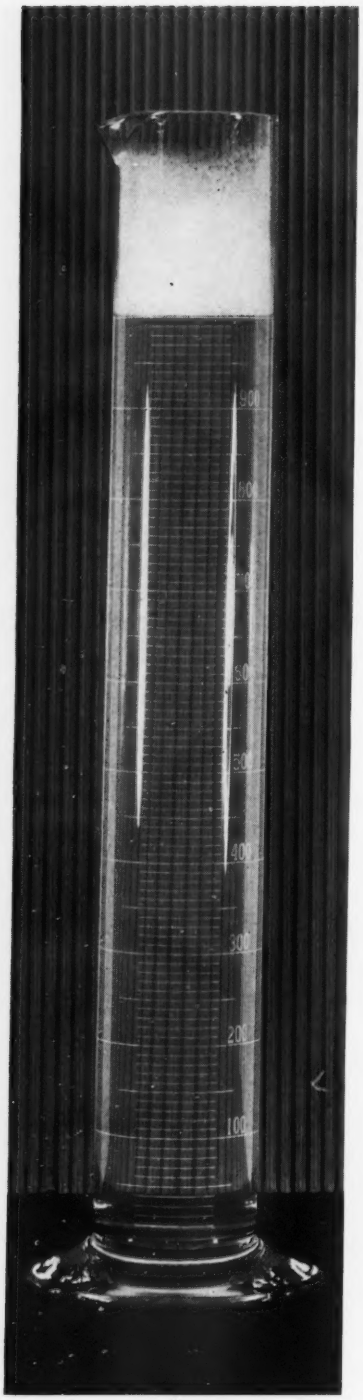
E. W. Reese has recently been named general sales manager of Emery Industries, Inc., Cincinnati, fatty acids, succeeding K. L. Schanbacher who has resigned. Mr. Reese has been affiliated with the manufacturing and sales departments of Emery Industries for the past sixteen years.

To Suspend Wolf Awards

The Irwin D. Wolf Awards for distinctive merit in packaging, a feature of the annual Packaging Exposition and Conference, will not be held in connection with the next Exposition, scheduled for Chicago in April of next year. The awards will be suspended for a year pending a study of how they should be revised, according to an announcement made by Alvin E. Dodd, president of the American Management Association, sponsors of the Exposition. The Exposition is to be held at the Stevens Hotel from April 1 to 4, inclusive.

Represent Easson's Soap Co.

Lang & Stroh Co., San Francisco, are now representing Easson's Soap Co., Portland, Ore., in northern California and Nevada.



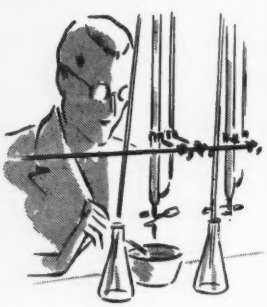
20% to 30% SOAP SAVING

MADE POSSIBLE BY UNIQUE MAGNESIUM REPRESSIVE ACTION OF VICTOR TETRA SODIUM PYROPHOSPHATE

BECAUSE natural hard waters contain appreciable amounts of magnesium hardness, a 20% to 30% saving in soap is possible through the use of tetra sodium pyrophosphate. This fact is readily demonstrated by the simple test illustrated in the adjoining picture.

A solution of $MgSO_4$ equivalent to 200 ppm $CaCO_3$ is treated with 0.1% soap and 0.08% $Na_4P_2O_7$ at 140° F. The magnesium solution remains clear and produces abundant suds.

This unique magnesium repressive action of Victor Tetra Sodium Pyrophosphate means that equivalent washing results can be achieved at less cost or that <u>better</u> results can be obtained at equivalent cost. It also gives the housewife a 20% to 30% safety factor toward having active soap present at the end of the washing operation. Furthermore, it reduces the total amount of <u>insoluble</u> soaps present in the washing solution by 20% to 30% which obviously diminishes the chances of retaining such soaps in the cloth.



VICTOR CHEMICAL WORKS
141 W. Jackson Blvd. Chicago, Ill.

VICTOR

HEADQUARTERS FOR...
pHosphates

Boston Bims Prize Winners

Prize winners of the Bims of Boston golf tournament held at the Commonwealth Country Club, Newton, Mass., on June 27 were as follows: Grand door prize: E. C. Merrill, United Drug Co.; Low gross member prize: Paul Mulvanity, Nashua Gummed Coated Paper Co.; Low net member prize: Ralph Stevenson, Givaudan-Delawanna; Low gross guest prize: B. T. Bush, Sr.; Kickers prizes: Frank Hincks, Minard Co.; W. S. Wallace, U. S. Industrial Chem. Inc.; Wilmer Starkey, Chas. Pfizer & Co.; F. J. Hailer, United Drug Co.; William B. Richardson, Amer. Mineral Spirits Co.; and G. C. Coleman, Armstrong Cork Co.

The second golf tournament of the Bims of Boston is to be held on Aug. 8, at the Charles River Country Club, Newton Center, Mass., according to Robert C. Kelly, chairman.

First Lady Leaves Soap Program

Mrs. F. D. Roosevelt, who has been broadcasting for Manhattan Soap Co. on Tuesday and Thursday afternoons, was not signed for a new series when her contract expired on July 25, it was announced recently. National Broadcasting Co. officials pointed out that Mrs. Roosevelt had never appeared on a radio series for more than thirteen weeks, the length of time of her contract with Manhattan Soap Co.

Survey Farm Soap Use

Results of a survey of soap use on the farm have just been released by The Pacific Northwest Farm Trio, publishers of *The Washington Farmer*, *The Idaho Farmer* and *The Oregon Farmer*. Of approximately 200,000 farms in those three states it is indicated that 73.1 per cent use laundry soap, the average amount used annually per farm being 64.8 cakes. Scouring cleansers are used on 59.2 per cent of the farms surveyed, the average annual consumption per farm being 8.6 cans or cakes. Soap chips are used on 28.9 per cent of the farms covered, the average annual consumption being 9.5 packages. Washing powders are used on 59.8 per cent of the farms in the northwest district, the average annual consumption being 12.5 packages. Toilet soap finds use on 86 per cent of these farms, the average number of cakes used per year being 36.5. Tooth powder and paste find use on 61.1 per cent of the farms covered, annual consumption averaging 6.9 packages or cans. Shaving soap and cream is used on 66.9 per cent of the farms surveyed, the average annual consumption being estimated at 4.2 packages.

Campaign for "Lifebuoy" Soap

Lever Bros. Co., has started a hot weather advertising campaign for "Lifebuoy" soap, using large newspaper and magazine space and radio time. William Esty & Son are the agents.

Offer Premium with "Buds"

Two cakes of its new "Buds" toilet soap, together with a cup and saucer is a special offer that is currently being featured by Swift & Company in California retail outlets. The combination, from attractive floor displays in super markets, sells for 15 cents.

Offer New Jergens Toilet Soap

To introduce a new line of toilet soaps, the Andrew Jergens Company, of Los Angeles, is featuring in California retail outlets a special offer of four cakes of wrapped toilet soap for 15 cents. The pack contains one cake each of pine, jasmin, rose carnation and gardenia soap, sealed together with a red strip which carries the message: "Introducing Jergens Fine Toilet Soap, By the Makers of Jergens Lotion, Buy three cakes, Get four."

Dow Earnings Up 71%

Net income of Dow Chemical Co., Midland, Mich., and its subsidiaries for the fiscal year ended May 31, 1940, amounted to $7,159,-167.12 after provision for depreciation and Federal income taxes. This was equivalent to $6.65 per share of common stock. Net profit for the fiscal year ended May 31, 1939, was $4,178,-485.17 or $3.95 per share.

Chem. Salesmen's Golf Winners

Prize winners at the second golf tournament of the Salesmen's Association of the American Chemical Industry, held at the Canoe Brook Country Club, Summit, N. J., on July 16 were as follows: Class A: Charles Slater, J. T. Baker Chemical Co. Class B: Ira Vandewater, R. W. Greef & Co.; second, Al. Leith, Dow Chemical Co. Kickers class: Bart Sheehan, E. I. du Pont de Nemours & Co. Other prize winners were: Walter Schappa, E. I. du Pont de Nemours & Co.; Walter Merrill, Joseph Turner & Co., Ridgefield, N. J.; Edward S. Burke, William Neuberg, Neuberg Chemical Corp.; R. W. Moister, Jr., Michigan Alkali Co. and C. F. Smith.

The next Chemical Salesmen's Golf Tournament will be held Aug. 20 at the Bonnie Briar Country Club, Larchmont, N. Y. The fourth and last meeting of the season is to be held Sept. 17 at the Pomonok Golf Club, Flushing, Long Island.

Lever Profits Higher

Net profits of Lever Brothers & Unilever, Ltd., for 1939 have been returned at £6,742,053, which compares with £6,319,244 for 1938. Both figures are after deducting taxation. The ordinary dividend for the year is to be kept at 10 per cent by a final payment of 5¼ per cent on July 16.

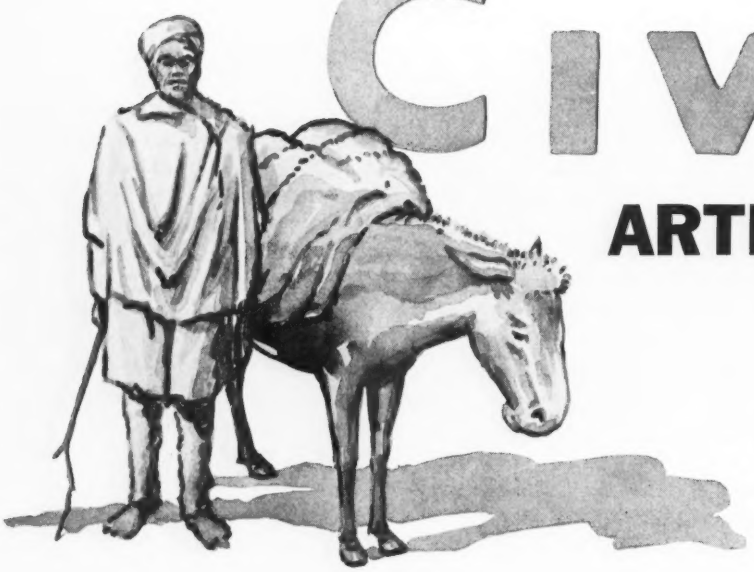
Office Mgrs. Elect Maienschein

C. F. Maienschein, assistant office manager, Procter & Gamble Co., Cincinnati, has been elected president of the Cincinnati Chapter of the National Office Management Association.

Plans Plant Additions

Mathieson Alkali Works, Inc., Niagara Falls, has awarded a contract to C. C. Bremer & Co. for construction of three additions to its plant at Buffalo Ave. Plans provide for new units 38 by 56 feet, 34 by 79 feet and 25 by 87 feet in size.

Victor Vivaudou, who built up a large business in the toiletries field under his own name in the early twenties, has recently joined the staff of Shulton, Inc., New York.



CIVET

ARTIFICIAL F. B.

After examining this product, the perfumer for one of America's largest soap manufacturers described it as . . .

"CLOSER TO GENUINE CIVET THAN ANYTHING I HAVE EVER OBSERVED"

What the introduction of such a product means to users of natural Civet in view of world conditions and the consequent withdrawal from American markets of all available stocks is simply this: That they now have a ready and dependable supply of what is reliably considered an excellent substitute for **good quality, natural Civet.**

CIVET ARTIFICIAL F. B. has powerful odorizing and fixation qualities. It is about twice the strength of Abyssinian Civet and is equal in strength to Civet Absolute. This is due to the fact that it contains none of the inert fats and waxes present in natural Civet. And to this fact may be attributed also its greater solubility and lessened tendency to cause discoloration in the finished product. Soap makers, especially, value it for this reason. As an alcoholic tincture, properly aged, CIVET ARTIFICIAL F. B. can be used in soap perfume formulas in the same manner and to achieve the same characteristic softness of odor imparted by Civet Absolute.

In suggesting that prospective users subject this product to every possible test before applying it, we are confident that it will substantiate all our claims and provide them a new and economical aid to better perfuming. Please address us on your letterhead for further particulars and/or samples.

FRITZSCHE BROTHERS, Inc.

PORT AUTHORITY COMMERCE BLDG., 76 NINTH AVENUE, NEW YORK, N. Y.

BRANCH STOCKS

BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.

FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE

FIXATIVES
SYNTHETICS
DEODORANTS

Many and diverse are the uses to which FRITZSCHE SPECIALTIES have been successfully applied. Years of practical use attest the effectiveness and economy of those described briefly below:

DEODORANT P-36—A recently developed and remarkably effective deodorant for use in products containing Lethane No. 384 Special. This deodorant completely neutralizes the Lethane effect without leaving any perceptible odor of its own. Powerful, yet inexpensive.

DUROFIX—Protects and prolongs the fragrance of scented soaps indefinitely. Combines with the perfume and protects it from destructive action of the alkaline bases. Does not alter odor-character or add to cost. Ideal fixative for white soaps; will not discolor.

JAVOLLAL—This specialty may be used as a substitute for Citronella Oils of Java or Ceylon in insecticides, soaps or other technical mixtures. It is very efficient and powerful—about twice the strength of Citronella—and imparts a finer, cleaner, more attractive odor.

METHALATE "C"—Substitutes for Methyl Salicylate in insecticide sprays based upon kerosene distillates. Possesses a similar odor and is equal in concentration, covering power and tenacity. Considerably lower in cost. Is useful in other technical products, also.

NEUTROLEUM—Completely and permanently deodorizes all technical mixtures—including insecticides—based upon petroleum distillates. In doing so permits reduction of from 40 to 70% of the perfume subsequently used for aromatization. Very economical.

OXIDEX—A complex and highly developed preservative for vegetable and animal oils and fats used in soaps. Prevents rancidity and avoids, thereby, deterioration of the product's original fragrance. Effective action due to complete solubility and dispersion in fixed oils and fats.

PARAPASTELS—These synthetic specialties are for use in naphthalene and paradichlorbenzene blocks. They destroy the unpleasant odor character of the product, substitute a clean, refreshing fragrance and color the block with any one of many attractive pastel tints.

SAFRELLA—This is an excellent, a very inexpensive and a proven substitute for Artificial Sassafras. It can be used in all insecticides, germicides or technical mixtures. Greatly improves ordinary household and industrial soaps as well as low priced toilet soaps.

Send for samples or descriptive circulars fully outlining various applications of the above specialties.

●

FRITZSCHE BROTHERS, Inc.

PORT AUTHORITY COMMERCE BLDG., 76 NINTH AVENUE, NEW YORK, N. Y.

BRANCH STOCKS

BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.

FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE

BIMS Battle at Golf

Over 90 members and guests of the BIMS of New York fought it out for 19 prizes in a golf tournament on the course of the Plandome Golf Club, Plandome, Long Island, on July 18, with the temperature at 90 and the humidity even higher. When the smoke had cleared away, it found first prize in the hands of Robert Delaney of Vadsco Sales Corp., with Joseph A. Huisking of Fritzsche Brothers in second place. Third prize went to Edward Kessling of E. Kessling Thermometers, and the other prize winners followed in order, including John S. Baker of National Can, Russell Boland of "Drug Trade News," I. H. Bander of McKesson & Robbins, George Halloway of Pond's Extract Co., Frank Mahr of Blake Manufacturing Co., Charles C. Bryan of Fritzsche Brothers, Horton Spitzer of Plaskon Co., A. H. Bergman of Oxzyn Co., Peter L. Forsman of C. H. Forsman & Co., David P. Bach of Weco Products Co., C. R. Keeley of "Toilet Requisites," F. J. Lueders of George Lueders & Co., S. E. Umensetter of Topics Publishing Co., E. F. Neimeth of National Magnesia Co., G. S. Furman of Merck & Co., W. L. Fretz of Dodge & Olcott Co.

Martin Schultes of the Hewitt Soap Co., New York, and chairman of the New York BIMS, handled the tournament, including all details. Robert C. Kelly, chairman of the BIMS of Boston, was among the guests at the party. The prizes were presented at a dinner held at the golf club following the day's festivities.

Dunning Heads Eastern Sales

George M. Dunning, long prominently identified with the sale of alkalis in the United States, has been placed in charge of general Eastern sales for Michigan Alkali Co., New York. Born in Brooklyn, Mr. Dunning was educated at Commercial High School and entered the chemical industry in 1904. In that year, he joined Edward Hill's Son & Co., which company subsequently became the sales department of Michigan Alkali Co. after having been its sales agent for a number of years.

U.S.I. ALCOHOL NEWS

August ★ A Monthly Review of Technical Developments for Chemists and Executives ★ 1940

CONCENTRATE FOR GLASS CLEANERS

U.S.I. Product Is Diluted with Water to Make Finished Compound

Efficient window cleaning compounds can be formulated easily and economically with the aid of a concentrated solvent blend developed by U.S.I. All that is necessary to make the finished cleaning compound is to dilute the concentrate with water. Proportions may be varied within wide limits, and the final compound may contain from 15 to 50% by volume of the solvent. Even the 15% mixture is safe for storage in cold weather.

The 50% dilution will affect paint, varnish, and lacquer, and will soften celluloid (such as eye-glass frames). The 15% compound, however, may be safely used on such surfaces, and is an excellent polish for eye-glasses.

An added advantage of this U.S.I. solvent is that it contains a rust inhibitor, which will prevent corrosion of the metal containers and atomizers in which the compound is packaged.

The solvent is available both without tint and with tint added. The manufacturer of the compound may select either the tinted or untinted blend, depending on his requirements.

Full information on this solvent may be obtained by writing U.S.I.

U.S.I.'s new solvent offers opportunities for the economical formulation of highly effective window-cleaning compounds. Addition of water is the only step necessary to make the finished product.

PURITY OF U.S.I. ALCOHOL AIDS DENTRIFICE MAKERS

Careful control of manufacturing processes and thorough testing of denaturants assure U.S.I. Specially Denatured Alcohol of the properties essential in the formulation of dentrifices and mouth washes. U.S.I. produces S. D. Alcohol in five formulas authorized for use in toothpaste and tooth powder; in eight formulas authorized for use in mouth washes.

CONVENIENT POURING SPOUT ON U.S.I. 5-GALLON DRUMS

Easy pouring from drum into small containers is possible with the improved design of U.S.I.'s 5-gallon drums. The telescoping pouring spout is provided with an extra link having a small opening. In addition, the link is bent at an angle that facilitates pouring into small vessels. When faster pouring is desired, the extra link is simply unscrewed. This improved drum will be used for Specially Denatured Alcohol and other U.S.I. products, with the exception of Pure Alcohol.

TECHNICAL DEVELOPMENTS

For further information write U.S.I.

Multi-layer tablets can be made by a patented process, it is claimed. The layers may be of different colors or of chemically incompatible ingredients separated by an inert layer, it is said. **(No. 360a)**

Skin protection is said to be afforded by a new product available in a series of creams and ointments. Different types protect against oils, greases, waxes, and petroleum products, it is claimed. **(No. 361a)**

A new mixer can be used in the laboratory for making up test batches, or for small production lots of cosmetics, pharmaceuticals, and fine chemicals, according to the manufacturer. **(No. 362a)**

A wrapping tissue recently patented can be sealed by heat alone, it is claimed. Material is described as transparent, moisture-proof, and flexible. The joint or closure produced by the heat is said to have high strength. **(No. 363a)**

New brushes for analytical balances are said to have cellulose fibers which will not pull out or change color. Brushes are intended primarily for dry powders, it is reported. **(No. 364a)**

A new compound is said to act as a fixative and intensifier when blended with essential oils. Maker states that it displays very high retentivity, can be diluted with benzyl benzoate to control its action. **(No. 365a)**

New use of ether is seen in extraction of the "anti-gray-hair" factor in vitamin B complex, it is reported. **(No. 366a)**

Vitamins B_1 and C have been made available for sale in bulk by a manufacturer who formerly produced them only for his own requirements, it is reported. **(No. 367a)**

U.S.I. INDUSTRIAL CHEMICALS, INC.
60 EAST 42ND ST., NEW YORK (USI) BRANCHES IN ALL PRINCIPAL CITIES
INDUSTRIAL ALCOHOL IN ALL GRADES AND ALL FORMULAS

Contracts Awarded

Soap Bids

In a recent opening by the Procurement Division, Treasury Department, Washington, D. C., the following low bids were submitted: by Colgate - Palmolive - Peet Co., Jersey City, 5.17 cents on 120,000 pounds of laundry soap, and 8.23 cents on 13,500 pounds of toilet soap; and by Los Angeles Soap Co., Los Angeles, 9.54 cents on 9,000 pounds of milled toilet soap.

Insecticide Award

S. B. Penick Co., New York, was awarded the contract on 165 gallons of insecticide at $4.88 a gallon in a recent opening by the Army Quartermaster Corps, Brooklyn.

Soda Lime Award

Dewey & Almy Chemical Co., Cambridge, Mass., was awarded the contract on 145,000 pounds of soda lime at 11 cents, in a recent opening by the Chemical Warfare Department for Edgewood Arsenal, Md.

Laundry Soap Bid

Armour & Co., Chicago, submitted the low bid of 2.6 cents a pound on 18,750 pounds of laundry soap in a recent opening for the Panama Canal, Washington, D. C.

Cleaning Compound Bids

Claire Manufacturing Co., Chicago, submitted the low bid of 5.75 cents on 58,000 pounds of cleaning compound, delivered to Mare Island, Calif., in a recent opening by the Bureau of Supplies & Accounts, Navy Department, Washington, D. C. In the same opening, Warner-Martin Corp., Boston, submitted a low bid on the same lot, fob works, of 5.436 cents.

Auto Polish Wax Awards

Auto Supply Co., Columbus, Ga., was awarded the contract on 500 pounds of auto polish wax at 50 cents in a recent opening by the Army Quartermaster Corps for Ft. Benning, Ga. In the same opening, Frank Corp., Savannnah, Ga., was awarded the contract on 500 pounds of automobile soap at 10 cents.

Floor Polish Award

R. M. Hollingshead Corp., Camden, N. J., was recently awarded a contract for floor polish valued at $10,092.50 by the Medical Corps, War Department, under the Walsh-Healey Act.

Laundry Soap Bid

Iowa Soap Co., Burlington, Iowa, was low bidder on 2,400 cases of laundry soap at $1.62 a case in a recent opening by the Procurement Division of the Treasury Department, Washington, D. C.

Metal Polish Award

Solarine Co., Baltimore, was awarded the contract on 15,000 pints of metal polish with a bid of $1,012.50 in a recent opening by Philadelphia Navy Yard.

Insecticide Bid

R. M. Hollingshead Corp., Camden, submitted the low bid of $1,237.50 on 60 drums of insecticide in a recent opening by Philadelphia Navy Yard.

Rust Preventive Bid

W. A. Hardaker, New Orleans bid low on 40,000 pounds of rust preventive compound for $1,420 in a recent opening by the Panama Canal Supply Division, Washington, D. C.

Metal Polish Award

Scranton Chemical Co., Scranton, Pa., was awarded the contract on 2,500 pint cans of metal polish at 6.95 cents a can, in a recent opening by the Army Quartermaster Corps for Jeffersonville, Ind.

Floor Wax Award

Nielco Chemical Corp., Detroit, was recently awarded a contract for floor wax valued at $19,948.50 for the Veterans Administration, Washington, D. C., under the Walsh-Healey Act.

Laundry Soap Award

Armour & Co. of Delaware, New York, was awarded a contract for laundry soap valued at $20,210.76 in a recent opening by the Quartermasters Corps, Washington, D. C., under the Walsh-Healey Act.

Soap Powder Bid

Armour & Co. of Delaware, New York, submitted the low bid of 2.18 cents on 5,600 pounds of soap powder in a recent opening by the Procurement Division, Treasury Department, Washington, D. C.

Laundry Soap Bid

Procter & Gamble Distributing Co., was low bidder on 144,000 pounds of laundry soap at 3.11 cents in a recent opening by the Procurement Division, Treasury Department, Washington, D. C.

Glycerine Award

Conray Products Co., New York, was awarded a contract for 2,300 pounds of glycerine for $319.70 in a recent opening by the Procurement Division, Veterans Administration, Washington, D. C.

Chip Soap Bid

Sterling Supply Corp., Philadelphia, bid low on 90,000 pounds of chip soap at $4.74 cwt., in a recent opening by the Procurement Division of the Treasury Department, Washington, D. C.

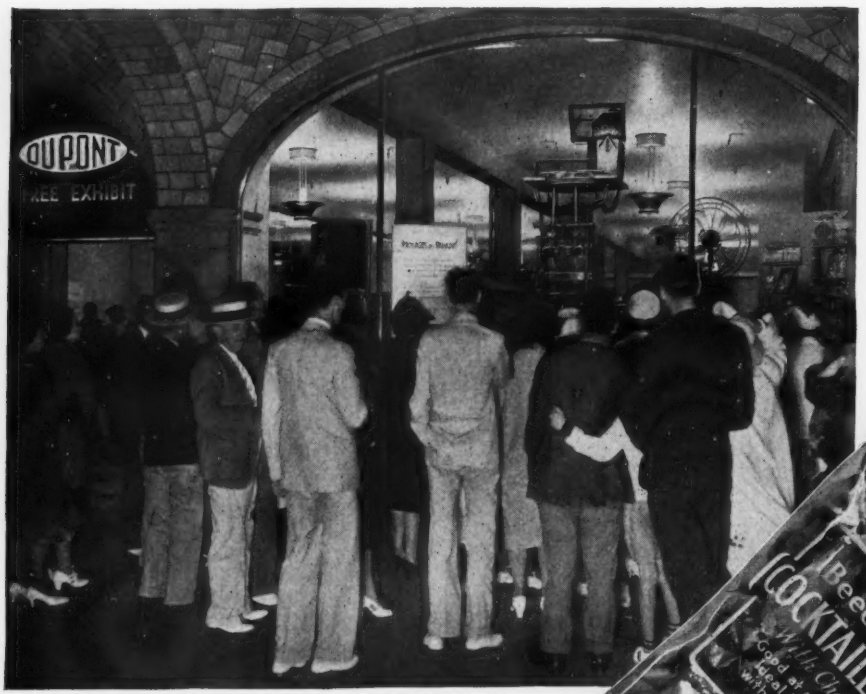
Scouring Powder Bid

Imperial Products Co., Philadelphia, was low bidder on 36,000 pounds of scouring powder at 1.25 cents in a recent opening by the Procurement Division, Treasury Department, Washington, D. C.

Metal Polish Bid

Waxaid Co., Baltimore, bid low on 8,004 lbs. metal polish at 6.68c in a recent opening by the Post Office Department, Washington, D. C.

ARE YOU GOING TO THE FAIR?



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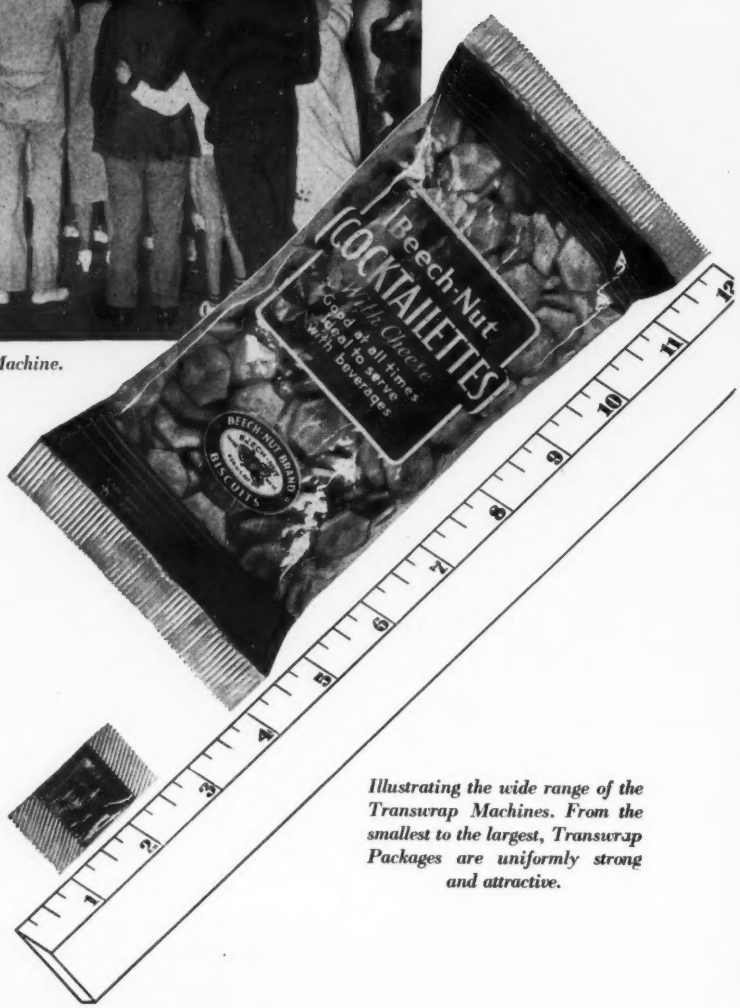

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New Trade Marks

The following trade-marks were published in the July issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

ROYAL—This in solid letters describing shoe polish. Filed by Hecker Products Corp., New York, Jan. 22, 1940. Claims use since 1879.

VELVA BATH MITS—This in fancy letters describing mit impregnated with soap. Filed by Elizabeth Arden, Inc., New York, April 8, 1940. Claims use since 1927.

RIPPLE—This in fancy outline letters describing soaps. Filed by Los Angeles Soap Co., Los Angeles, April 18, 1940. Claims use since Feb. 6, 1940.

NU-BOWL—This in solid letters describing toilet bowl cleaner. Filed by Recorg Supply Corp., April 29, 1940. Claims use since Feb. 1, 1936.

INSECTONOS — This in outline letters describing insecticides. Filed by Llewellyn M. James, Insectonos Co., Bloomington, Ill., April 17, 1939. Claims use since Nov. 28, 1893.

DO-DO—This in solid lower case letters describing disinfectant. Filed by Beacon Chemical Corp., Philadelphia, Feb. 23, 1940. Claims use since Feb. 16, 1940.

4-MEN—This in solid letters describing shampoo. Filed by Allen H. Rabin, Rabin Co., Los Angeles, March 23, 1940. Claims use since Jan. 25, 1940.

MON-O-SPRA — This in fancy letters describing insecticide. Filed by Andrew Wilson, Inc., Springfield, N. J., March 30, 1940. Claims use since March 8, 1940.

HEDY — This in solid lower case letters describing shampoo. Filed by Edward B. Cuddy, Hedy Products Corp., New York, May 1, 1940. Claims use since April 22, 1940.

MERCARBIC—This in solid letters describing antibacterial preparations. Filed by E. R. Squibb & Sons, New York, May 1, 1940. Claims use since April 17, 1940.

ZEFT—This in script letters describing antiseptic. Filed by Eduard F. Hutt, Hutt Products Co., Lone Jack, Mo., May 13, 1940. Claims use since May 9, 1940.

CONTAX—This in solid letters describing parasiticides. Filed by California Spray-Chemical Corp., Richmond, Calif., May 15, 1940. Claims use since May 6, 1940.

SNO-SAN—This in solid letters describing disinfectant. Filed by Standard Food Products, Inc., Indianapolis, May 17, 1940. Claims use since March 31, 1937.

LACTOP—This in solid letters describing cleaning compound. Filed by Turco Products, Inc., Los Angeles, March 2, 1940. Claims use since Aug. 2, 1938.

STEAMEZE—This in solid letters describing cleaning compound. Filed by Turco Products, Inc., Los Angeles, March 2, 1940. Claims use since Sept. 5, 1939.

FOAMAWAY—This in solid letters describing rug cleaner. Filed by Selig Co., Atlanta, May 2, 1940. Claims use since Feb. 14, 1935.

CARADENT—This in solid letters describing toothpaste. Filed by Caradent, Inc., New Orleans, Feb. 20, 1940. Claims use since April 29, 1939.

MAR-O-OIL—This in solid letters describing shampoo. Filed by Marrow's, Inc., Chicago, May 11, 1940. Claims use since Oct. 1, 1928.

DEREX—This in solid letters describing insecticide. Filed by Kilgore Development Corp., Washington, D. C., May 15, 1940. Claims use since Dec. 28, 1936.

ORTAZOL—This in solid letters describing insecticide. Filed by Miller Chemical & Fertilizer Corp., Baltimore, May 28, 1940. Claims use since March 1, 1940.

PENN-CRAFT — This in script letters describing no-rubbing wax. Filed by Penn-Champ Oil Corp., Penn Craft Products, Butler, Pa., May 20, 1939. Claims use since Jan. 1, 1939.

BLUE CARNATION — This in solid letters describing soaps. Filed by Roger & Gallet, New York, Jan. 23, 1940. Claims use since Aug. 15, 1925.

SKLEEN—This in solid letters describing cleaner. Filed by Vestal Chemical Co., St. Louis, May 4, 1940. Claims use since Feb. 7, 1931.

DIRT DOOM—This in fancy letters describing detergent material. Filed by Edgar A. Murray Co., Detroit, May 10, 1940. Claims use since March, 1940.

NOX-I-CIDE—This in solid letters describing disinfectants. Filed by G. E. Conkey Co., Cleveland, Jan. 10, 1940. Claims use since June, 1905.

APPROACH—This in solid letters describing shampoo. Filed by Franz Koenigsberger, New York, June 4, 1940. Claims use since May 27, 1940.

MORADE—This in solid letters in diamond within circle describing cleaning powder. Filed by Massachusetts Chemical Co., Boston, May 10, 1940. Claims use since Nov. 15, 1939.

TOPPER—This in colored letters on colored background describing shampoo. Filed by Gibbs & Co., Chicago, Sept. 9, 1939. Claims use since June 22, 1939.

SANIDENT—This in script letters describing liquid dentifrice. Filed by Sanident Products Co., Chicago, Oct. 18, 1939. Claims use since Dec. 15, 1937.

CREAM-O-SECT—This in solid letters describing insect repellent. Filed by National Associated Distributors, Inc., New York, April 17, 1940. Claims use since April 10, 1940.

VI-CHLO-RIS — This in solid letters describing mouth wash. Filed by Vi-Jon Laboratories, St. Louis,

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April 20, 1940. Claims use since March 8, 1940.

ALZAN—This in solid letters describing disinfectant. Filed by Sterling Products, Inc., Wheeling, W. Va., May 14, 1940. Claims use since April 10, 1940.

CIDAN — This in solid letters describing chemical products used in insecticides, etc. Filed by Givaudan-Delawanna, Inc., New York, May 31, 1940. Claims use since Nov. 2, 1939.

CYROTONE—This in solid letters describing insecticides. Filed by Venro Chemical Corp., Boston, June 12, 1940. Claims use since May, 1934.

VENRO — This in solid letters describing insecticides. Filed by Venro Chemical Corp., Boston, June 12, 1940. Claims use since January, 1937.

Trade Marks Granted

379,023. Paint remover. Chemical Products Co., Baltimore. Filed Feb. 23, 1940. Serial No. 428,832. Published April 16, 1940. Class 16.

379,038. Insecticide. Harry D. Nicholaou, Baltimore. Filed March 1, 1940. Serial No. 429,099. Published April 9, 1940. Class 6.

379,097. Auto polishes. Precision Lubricants, Inc., Denver. Filed Sept. 23, 1939. Serial No. 423,894. Published April 23, 1940. Class 16.

379,102. Liquid wax. American Products Co., Visco Chemical Products Co., Cincinnati. Filed Oct. 28, 1939. Serial No. 424,988. Published April 23, 1940. Class 16.

379,216. Water softener. Monroe Chemical Co., Quincy, Ill. Filed April 1, 1939. Serial No. 417,767. Published April 16, 1940. Class 6.

379,217. Water softener. Monroe Chemical Co., Quincy, Ill. Filed April 1, 1939. Serial No. 417,769. Published April 16, 1940. Class 6.

379,230. Dentifrice. Knox Co., Miami Beach, Fla. Filed May 27, 1939. Serial No. 419,921. Published July 18, 1939. Class 6.

379,256. Insecticides. American Products Co., Cincinnati. Filed Oct. 28, 1939. Serial No. 424,986. Published April 30, 1940. Class 6.

379,263. Antiseptics. Sharp & Dohme, Inc., Philadelphia. Filed Nov. 29, 1939. Serial No. 426,072. Published April 30, 1940. Class 6.

379,278. Deodorant. Homer H. Dary & Son, Racine, Wis. Filed Dec. 30, 1939. Serial No. 427,010. Published March 19, 1940. Class 6.

379,282. Shampoo. Charles of the Ritz, Inc., New York. Filed Jan. 6, 1940. Serial No. 427,192. Published April 30, 1940 Class 6.

379,301. Paradichlorobenzene. E. I. du Pont de Nemours & Co., Wilmington, Del. Filed Jan. 23, 1940. Serial No. 427,783. Published April 16, 1940. Class 6.

379,308. Insecticides. West Disinfecting Co., Long Island City, N. Y. Filed Jan. 26, 1940. Serial No. 427,915. Published April 9, 1940. Class 6.

379,311. Insecticides. Elkay Products Corp., New York. Filed Jan. 29, 1940. Serial No. 427,973. Published April 30, 1940. Class 6.

379,317. Antiseptic. McNeil Laboratories, Inc., Philadelphia. Filed Jan. 30, 1940. Serial No. 428,047. Published April 9, 1940. Class 6.

379,324. Insecticides. Stanco, Inc., New York, Filed Feb. 2, 1940. Serial No. 428,178. Published April 23, 1940. Class 6.

379,334. Antiseptic. Wm. S. Merrell Co., Cincinnati. Filed Feb. 5, 1940. Serial No. 428,245. Published April 16, 1940. Class 6.

379,342. Insect repellent. San Marcos Chemical Co., San Marcos, Texas. Filed Feb. 7, 1940. Serial No. 428,334. Published April 9, 1940. Class 6.

379,352. Insecticides. Western Chemical Co., St. Joseph, Mo. Filed Feb. 9, 1940. Serial No. 428,412. Published April 30, 1940. Class 6.

379,366. Household ammonia. Beacon Chemical Corp., Philadelphia. Filed Feb. 16, 1940. Serial No. 428,603. Published April 9, 1940. Class 6.

379,391. Insecticide. Niagara Sprayer & Chemical Co., Middleport, N. Y. Filed Feb. 26, 1940. Serial No. 428,925. Published April 9, 1940. Class 6.

379,396. Insecticide. Hercules Powder Co., Wilmington. Filed Feb. 27, 1940. Serial No. 428,960. Published April 9, 1940. Class 6.

379,428. Parasiticides. California Spray-Chemical Corp., Richmond, Calif. Filed March 4, 1940. Serial No. 429,169. Published April 9, 1940. Class 6.

379,429. Parasiticides. California Spray-Chemical Corp., Richmond, Calif. Filed March 4, 1940. Serial No. 429,170. Published April 9, 1940. Class 6.

379,435. Deodorant. Airox Co., New York. Filed March 5, 1940. Serial No. 429,210. Published April 16, 1940. Class 6.

379,515. Polishes and waxes. O-Cedar Corp., Chicago. Filed June 29, 1936. Serial No. 380,406. Published Oct. 24, 1939. Class 16.

379,530. Insecticides. Lucas-Kil-Tone Co., Philadelphia. Filed June 13, 1939. Serial No. 420,461. Published April 30, 1940. Class 6.

379,572. Toilet soap. Leland J. Arms, San Francisco. Filed Feb. 13, 1940. Serial No. 428,517. Published April 30, 1940. Class 4.

379,616. Cleanser. Diversey Corp., Chicago. Filed March 4, 1940. Serial No. 429,173. Published April 30, 1940. Class 4.

379,672. Shoe polish. O-Cedar Corp., Chicago. Filed Nov. 12, 1938. Serial No. 412,662. Published May 7, 1940. Class 4.

379,710. Floor seal. Wilson-Imperial Co., Newark. Filed Jan. 11, 1940. Serial No. 427,353. Published May 14, 1940. Class 16.

379,714. Shaving preparation. Spade Products Co., New York. Filed Jan. 27, 1940. Serial No. 427,946. Published May 7, 1940. Class 4.

379,723. Soaps. Maximax Corp., Chicago. Filed Feb. 19, 1940. Serial No. 428,699. Published May 14, 1940. Class 4.

379,732. Soap. Lehn & Fink Products Corp., Bloomfield, N. J. Filed Feb. 24, 1940. Serial No. 428,879. Published May 7, 1940. Class 4.

379,786. Floor polish. Wilson-Imperial Co., Newark. Filed March 27, 1940. Serial No. 430,052. Published May 14, 1940. Class 16.

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Raw Material Markets

As **of July 29, 1940**

NEW YORK—Practically all prices of animal fats, vegetable oils and soap stocks in general moved to lower levels during July. Developments in the European situation and heavy domestic production of tallow, coconut oil, greases, etc., combined to push quotations downward. Carnauba wax prices fell off steadily during the month bringing quotations to more "normal" levels with a strong probability of future movements in a continued downward direction. The essential oils exhibited a mixed trend, citronella, sweet almond, cedar wood, cade, cajeput, petitgrain, lemongrass, and camphor all being quoted lower than a month ago, while all grades of geranium, pennyroyal, eucalyptus, fennel, and sassafras moved to higher levels. In the insecticide material market, pyrethrum extract dropped off again; derris and cube prices remained the same as they were a month ago. The major change in chemicals was the rise in price of ethyl alcohol, U.S.P., following the levy of an additional defense tax on distilled spirits.

Animal Fats

Quotations on inedible tallow and all grades of greases fell off ¾ to ⅞ of a cent a pound this period in a generally quiet market. Most sellers and buyers seem to be disposed to await further developments in the European war as well as in political affairs in the United States, especially as the trend in lard futures has been toward a lower level. Extra loose tallow is currently quoted at 3¾ cents a pound, delivered, and special tallow at 3⅝ cents a pound, delivered. (F.o.b. prices are ⅛ cent a pound under delivered.)

Coconut Oil

Coconut oil prices dropped off ⅛ of a cent this period; Manila coconut oil being quoted currently at 2¾ to 2⅞ cents a pound, tank cars, New York. Pacific Coast futures fell to 2⅜ cents.

Olive Oil

Denatured olive oil dropped to a level of $1.45 this period, with limited quantities available at the lower price. Some supplies from Greece are still on their way to the United States, it has been reported, but after they have arrived, it is doubtful whether new shipments will be forthcoming. Olive oil foots also fell to a lower price range this period.

Geranium Oil

The price of Algerian geranium oil was pushed up $1.00 this period to be quoted currently at $3.75 to $4.00 a pound as another change necessitated by the closing of the Mediterranean. Limited stocks in the United States and the difficulty of obtaining more supplies keep prices high on all essential oils which are produced only in areas affected by the European war.

Citronella Oil

Citronella oil quotations fell this period. The Java grade is currently quoted at 30 to 31 cents a pound and the Ceylon variety at 32 cents a pound.

Carnauba Wax

All grades of carnauba wax were reduced in price 6 to 10 cents a pound as reports from Brazil on the new crop make this market a great deal easier. The No. 1 yellow grade has dropped to a range of 60 to 61 cents a pound; No. 2, North Country, is now being quoted 9 cents under the price of a month ago at a current level of 55 to 56 cents a pound; No. 3, chalky, has dropped to a range of 47 to 48 cents a pound. Indications are toward still lower prices on all grades of carnauba wax in the near future.

Pyrethrum

Continuing the downward trend of the past several months, pyrethrum extract fell still lower this period. The 20 to 1 extract is now quoted at $5.25 to $5.75 a gallon, depending on the seller. Insect powder is holding steady at about 27 cents a pound following the price reduction in June.

Ethyl Alcohol

Prices on pure ethyl alcohol were advanced $1.42½ a gallon on July 1, bringing the price in drums, car lots, up to $5.96½ a gallon; for less than car lots, 1 to 18 barrels, the current price is $6.04 a gallon. The rise in price is due only to the increase in the Federal revenue on distilled spirits, assessed to raise funds for national defense. Of the total price, alcohol producers receive only 20½ cents a gallon. The remainder, or almost 97 per cent of the sales price, is taxes.

Pennyroyal Oil

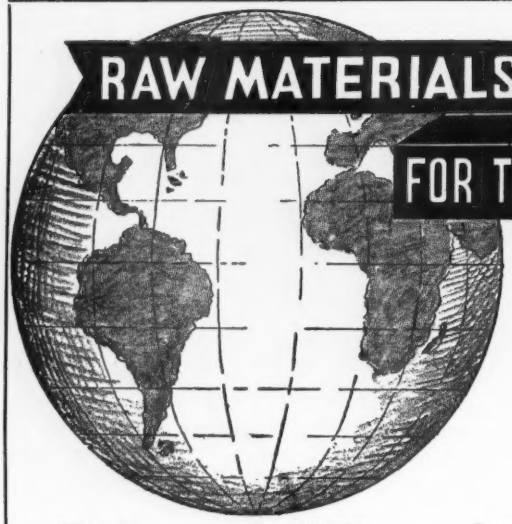
Prices of imported pennyroyal were raised 25 cents a pound this period, bringing the price up to a range of $2.50 to $2.75. The domestic grade remained unchanged at $3.00 a pound, nominal.

Lemongrass Oil

Lemongrass oil dropped off this period to a current range of 70 to 73 cents a pound, in cans, for the native product.

Daughter to Fairhursts

A daughter was born on July 26th in the Orange Memorial Hospital, Orange, N. J., to Mrs. William S. Fairhurst, whose husband is associated with Tombarel Products Corp., New York. Mrs. Fairhurst is the eldest daughter of L. J. Zollinger of Tombarel.



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Corn Oil	Perilla Oil	Neatsfoot Oil	Caustic Soda	Metasilicate
Cottonseed Oil	Rapeseed Oil	Oleo Stearine	Soda Ash	Tri Sodium Phosphate
Palm Oil	Sesame Oil	Stearic Acid	Caustic Potash	Di Sodium Phosphate
Palm Kernel Oil	Soya Bean Oil	White Olein	Carbonate Potash	Chlorphyll
Olive Oil	Teaseed Oil	Tallow	Sal Soda	Superfatting Agent

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Raw Material Prices

(As of July 29, 1940)

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities

Chemicals

Acetone, C. P., drums	lb.	$ .06½	$ .07
Acid, Boric, bbls. 99½%	ton	96.00	128.00
Cresylic, drums	gal.	.68	.70
Low boiling grade	gal.	.68	.70
Muriatic, C. P., carboys	lb.	.08	—
Oxalic, bbls.	lb.	.10¾	.12
Adeps Lanae, hydrous, drums	lb.	.24½	.25
Anhydrous, drums	lb.	.26½	.27
Alcohol, Ethyl, U.S.P., bbls.	gal.	5.96½	6.04
Complete Denat., SD 1, drums, ex.	gal.	.28½	.34½
Alum. Potash lump, bbls.	lb.	.04	—
Ammonia Water, 26°, drums	lb.	.02¼	.02½
Ammonium Carbonate, tech., bbls.	lb.	.08	—
Bentonite, 1, works, 325 mesh	ton	16.00	—
Bentonite, 2, works, 200 mesh	ton	11.00	—
Bleaching Powder, drums	100 lb.	2.00	3.35
Borax, pd., cryst., bbls., kegs	ton	58.00	74.00
Carbon Tetrachloride, car lots	gal.	.66½	1.10
L. C. L.	gal.	.73	1.20
Caustic, see Soda Caustic, Potash Caustic			
China Clay, filler	ton	10.00	26.00
Cresol, U.S.P., drums	lb.	.09¾	.10¼
Creosote Oil	gal.	.13½	.14½
Feldspar, works (200 to 325 mesh)	ton	32.00	35.00
Formaldehyde, bbls.	lb.	.05½	.06
Fullers Earth	ton	15.00	—
Glycerine, C.P., drums	lb.	.12½	.13
Dynamite, drums	lb.	—	Nom.
Saponification, drums	lb.	.08¾	.09
Soap, lye, drums	lb.	.07¾	.08¼
Hexalin, drums	lb.	.30	—
Lanolin, see Adeps Lanae.			
Lime, live, bbls.	per bbl.	—	2.45
Mercury Bichloride, kegs	lb.	2.24	2.39
Naphthalene, ref. flakes, bbls.	lb.	.06¼	.07
Nitrobenzene (Mirbane) drums	lb.	.08	.09
Paradichlorbenzene, drums	lb.	.11	.15½
Petrolatum, bbls. (as to color)	lb.	.02¾	.07½
Phenol (Carbolic Acid), drums	lb.	.13	.14¾
Pine Oils, bbls.	gal.	.50	.59
Potash, Caustic, solid	lb.	.06¼	.06¾
Flake, 88-92%	lb.	.07	.07½
Liquid, 45% basis	lb.	.03½	.03¾
Potassium Carbonate, solid	lb.	.06½	.06¾
Liquid	lb.	.02¾	.03⅛
Pumice Stone, powder	100 lb.	No Prices	
Rosins (600 lb. bbls. gross for net)—			
Grade D to H	100 lb.	1.85	2.04
Grade I to N	100 lb.	2.04	2.37
Grade WG to X	100 lb.	2.62	3.00
Wood	280 lb.	3.50	5.00
Rotten Stone, pwd., bbls.	lb.	—	—
Silica	ton	20.00	27.00
Soap, Mottled	lb.	.04⅛	.04½
Olive Castile, bars	lb.	.17	.25
Olive Castile, powder	lb.	.26	.29
Powdered White, Neutral	lb.	.18½	.20
Olive Oil Foot, bars, 68-70%	lb.	.09	—
Green, U.S.P.	lb.	.08	.09
Tallow Chips, 88%	lb.	.06⅛	.06¾
Soda Ash, cont., wks., bags, bbls.	100 lb.	1.10	1.35
Carlots, in bulk	100 lb.	.90	.95
Soda Caustic, cont., wks., solid	100 lb.	2.30	—
Flake	100 lb.	2.70	2.95
Liquid, tanks, 47-49%	100 lb.	1.95	—
Soda Sal., bbls.	100 lb.	1.10	1.30
Sodium Chloride (Salt)	ton	15.00	15.60
Sodium Fluoride, bbls.	lb.	.07	.08¼
Sodium Hydrosulfite, bbls.	lb.	.16	.17
Sodium Metasilicate, ground	100 lb.	3.75	4.80
Crystalline	100 lb.	2.35	3.35
Sodium Pyrophosphate	100 lb.	5.10	5.30
Sodium Silicate, 40 deg., drum	100 lb.	.80	1.20
Drums, 52 deg. wks.	100 lb.	1.40	1.80
Tar Acid Oils, 15-25%	gal.	.22	.27
Triethanolamine	lb.	.19	.20
Trisodium Phosphate, bags, bbls.	lb.	.0225	.0285
Zinc Oxide, lead free	lb.	.06½	.07¾

Oils — Fats — Greases

Babassu, tanks, futures	lb.	.05⅝	.06
Castor, No. 1, bbls.	lb.	.11½	.12¾
No. 3, bbls.	lb.	.11	.12¼
Coconut (without excise tax)			
Manila, tanks, N. Y.	lb.	.02¾	.02⅞
Tanks, Pacific Coast, futures	lb.	.02⅜	—
Copra, bulk, coast	lb.	.0145	.0150
Corn, tanks, Mills	lb.	.05½	.05⅝
Cottonseed, crude, tanks, mill	lb.	.04¾	.05⅛
PSY, futures	lb.	.06	.06⅛
Fatty Acids—			
Corn Oil, tanks	lb.	.05¾	—
Coconut Oil, tanks, Twitchell	lb.	.08½	—
Cotton Oil, tanks	lb.	.05¾	.06
Settled soap stock, Chicago	lb.	.02¾	.03
Boiled soap stock, 65%, Chi.	lb.	.03¾	.04
Foots, 50%, Chicago	lb.	.01½	.01¾
Red Oil, bbls., dist. or sapon.	lb.	.06¾	.07¾
Tanks	lb.	.06	.06¼
Stearic Acid,			
Double pressed	lb.	.09¾	.10¾
Triple pressed	lb.	.12½	.13½
Greases, choice white, tanks, Chi.	lb.	.03⅜	.03½
Yellow	lb.	.03⅛	.03¼
Lard, city	lb.	.05½	.05¾
Linseed, raw, bbls.	lb.	.0910	.0990
Tanks, raw	lb.	.0850	.0870
Olive, denatured, bbls., N. Y.	gal.	1.45	Nom.
Foots, bbls., N. Y.	lb.	.08⅝	.08¾
Palm, Sumatra, cif. New York, tanks	lb.	.02¼	.02½
Palm, kernel, shipment	lb.	No Prices	
Soya Bean, domestic, tanks, crude	lb.	.06	.06½
Stearine, oleo, bbls.	lb.	.05¼	Nom.
Tallow, special, f.o.b. plant	lb.	.03⅝	—
City, ex. loose, f.o.b. plant	lb.	.03¾	—
Teaseed Oil, crude	lb.	.12½	Nom.
Wale, refined	lb.	—	Nom.

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Anise, cans, U.S.P.	lb.	.72	.75
Bay, cans	lb.	1.20	1.25
Bergamot, coppers	lb.	8.50	Nom.
Artificial	lb.	1.35	3.00
Birch Tar, rect., cans	lb.	.75	.80
Crude, dms.	lb.	.25	.26
Bois de Rose, Brazilian	lb.	1.60	1.65
Cayenne	lb.	1.70	1.80
Cade, cans	lb.	.40	.45
Cajeput, native, cans	lb.	.62	.72
Calamus, cans	lb.	8.25	8.50
Camphor, Sassy, drums	lb.	.28	.29
White, drums	lb.	.31	.33
Cananga, native, cans	lb.	1.60	1.65
Rectified, cans	lb.	2.00	2.35
Caraway Seed	lb.	5.00	Nom.
Cassia, Redistilled, U.S.P.	lb.	1.25	1.30
Cedar Leaf, cans	lb.	.80	.85
Cedar Wood, light, drums	lb.	.19	.22
Citronella, Java, drums	lb.	.30	.31
Citronella, Ceylon, drums	lb.	.32	.33
Clove, U.S.P., cans	lb.	1.20	1.25
Eucalyptus, Austl., U.S.P., cans	lb.	.70	.72
Fennel, U.S.P., cans	lb.	3.00	3.25
Geranium, African, cans	lb.	3.75	4.00
Bourbon, cans	lb.	3.85	4.00
Turkish	lb.	2.50	2.75
Hemlock, tins	lb.	.80	.85
Lavender, U.S.P., cans	lb.	3.25	3.75
Spike, Spanish, cans	lb.	1.20	1.85
Lemon, Ital., U.S.P.	lb.	4.75	Nom.
Cal.	lb.	3.10	3.25
Lemongrass, native, cans	lb.	.70	.73
Linaloe, Mex., cases	lb.	1.30	1.35
Nutmeg, U.S.P., cans	lb.	2.60	2.70
Orange, Sweet, W. Ind., cans	lb.	2.00	2.75
Italian cop	lb.	5.75	8.00
Distilled	lb.	.90	—
California, expressed	lb.	2.00	—
Origanum, cans, tech.	lb.	1.50	1.80
Patchouli	lb.	7.25	8.00
Pennyroyal, dom.	lb.	3.00	Nom.
Imported	lb.	2.50	2.75
Peppermint, nat., cans	lb.	2.65	2.95
Redis., U.S.P., cans	lb.	2.90	3.15
Petitgrain, S. A., cans	lb.	1.50	1.55
Pine Needle, Siberian	lb.	1.35	1.40
Rosemary, Spanish, cans	lb.	.67	.68
drums	lb.	.62	.63
Sandalwood, E. Ind., U.S.P.	lb.	5.25	5.50
Sassafras, U.S.P.	lb.	1.15	1.20
Artificial, drums	lb.	.80	.81
Spearmint, U.S.P.	lb.	2.25	2.30
Thyme, red, U.S.P.	lb.	.80	1.75
White, U.S.P.	lb.	.95	1.95
Vetivert, Bourbon	lb.	5.50	5.75
Ylang Ylang, Bourbon	lb.	3.00	6.50

Aromatic Chemicals

Acetophenone, C. P.	lb.	$1.60	—
Amyl Cinnamic Aldehyde	lb.	1.70	$2.00
Anethol	lb.	1.10	1.15
Benzaldehyde, tech.	lb.	.55	.60
U.S.P.	lb.	.85	.95
Benzyl, Acetate	lb.	.44	.49
Alcohol	lb.	.63	.68
Citral	lb.	1.40	3.10
Citronellal	lb.	.75	.80
Citronellol	lb.	1.60	1.85
Citronellyl Acetate	lb.	4.00	7.00
Coumarin	lb.	2.75	3.00
Cymene, drums	gal.	.90	1.25
Diphenyl oxide	lb.	.50	.55
Eucalyptol, U.S.P.	lb.	.80	.85
Eugenol, U.S.P.	lb.	1.75	2.00
Geraniol, Domestic	lb.	.60	3.00
Imported	lb.	2.00	3.00
Geranyl Acetate	lb.	1.20	2.50
Heliotropin	lb.	3.00	3.20
Hydroxycitronellal	lb.	2.00	2.50
Indol, C. P.	lb.	32.00	34.00
Ionone	lb.	2.25	4.15
Iso-Eugenol	lb.	2.80	4.25
Linalool	lb.	2.10	3.30
Linalyl Acetate	lb.	2.50	3.00
Menthol	lb.	2.50	3.60
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.20	2.30
Paracresol	lb.	4.50	6.00
Salicylate, U.S.P.	lb.	.35	.37
Musk Ambrette	lb.	3.65	3.95
Ketone	lb.	3.70	4.10
Xylene	lb.	1.05	1.20
Phenylacetaldehyde Sp.	lb.	2.10	2.50
Phenylacetic Acid	lb.	1.75	3.00
Phenylethyl Alcohol	lb.	2.50	3.35
Rhodinol	lb.	5.50	10.90
Safrol	lb.	1.00	1.10
Terpineol, C. P., drs.	lb.	.25	—
Cans	lb.	.28	—
Terpinyl Acetate, 25 lb. cans	lb.	.82	.85
Thymol, U.S.P.	lb.	1.55	1.60
Vanillin, U.S.P.	lb.	2.50	2.75
Yara Yara	lb.	1.25	1.55

Insecticide Materials

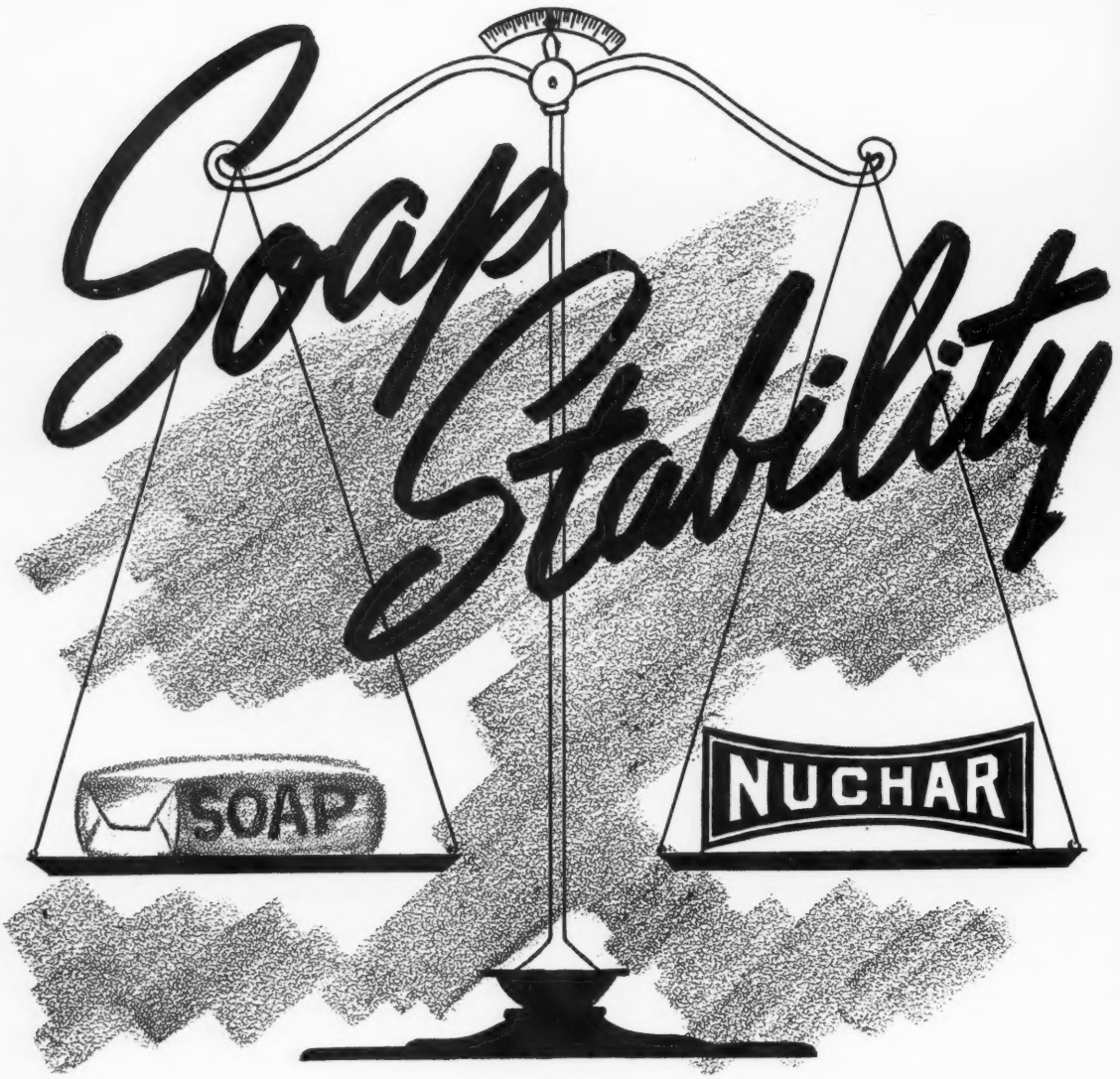
Insect Powder, bbls.	lb.	.27	.31
Pyrethrum Extract			
5 to 1	gal.	1.35	1.55
20 to 1	gal.	5.25	5.75
30 to 1	gal.	7.80	8.60
Derris, powder—4%	lb.	.17	.20
Derris, powder—5%	lb.	.21	.25
Cube, powder—4%	lb.	.16	.19
Cube, powder—5%	lb.	.20	.25

Gums

Arabic, Amb. Sts.	lb.	.14	.15
White, powdered	lb.	.18	.20
Karaya, powdered No. 1	lb.	.14	.33
Tragacanth, Aleppo, No. 1	lb.	3.50	3.75
Flake	lb.	No Prices	

Waxes

Bees, white	lb.	.35	.37
African, bgs.	lb.	.23	.24
Refined, yel.	lb.	.29	.31
Candelilla, bgs.	lb.	.18½	.19
Carnauba, No. 1, yellow	lb.	.60	.61
No. 2, N. C.	lb.	.55	.56
No. 3, Chalky	lb.	.47	.48
Ceresin, yellow	lb.	.11½	.15
Paraffin, ref., 125-130	lb.	.0570	.0620



SOAP stability is becoming of such increasing importance that every soap manufacturer should investigate the use of NUCHAR GFO.

The use of activated carbon in the bleaching of tallows for soap is quite often thought of as a luxury, and consequently its use in this field does not approach the edible shortening field. It has been reasoned that in the manufacture of edible products, an adsorbent mild in its effect on stability must be used, thus, the popularity of NUCHAR Activated Carbon in this industry. Up to the present, in the manufacture of soap this has not been found necessary and generally stronger methods of bleach have been employed.

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Production Section

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries.*

Acid Treatment of Oils

THERE is scarcely any method of treating fats, oils or fatty acids, as applied in the soap industry, such as the splitting of fats, the distillation of fatty acids, or the bleaching of these materials with oxidizing or reducing agents, or with bleaching earths, decolorizing carbon, etc., but what a previous purification would not be advantageous or even necessary.

When the oil or fat is treated merely for the gross removal of dirt particles and turbid matter, washing with salt water is often sufficient. But if calcium or iron salts, protein or glutinous matter and especially colored impurities have to be separated from the fat, pretreatment with acid is recommended. To separate slimy or glutinous material, the crude fat is treated with 1 per cent, based on the weight of the fat, of a 40 per cent solution of phosphoric acid. A 40 per cent solution is 30° Be. and has a specific gravity of 1.265.

The treatment is carried out in a lead-lined vessel or better yet, in acid-proof stoneware equipped with a stirring device. The mixture is stirred as fast as possible at room temperature for a half hour. The temperature is then increased to 55-60° C. (131-140° F.), 1 per cent of water is added and the mixture is stirred for another 5 minutes at the increased temperature. After the mass has been allowed to settle for 3-4 hours, the lower layer is drawn off and the upper or remaining layer washed with hot water.

Sulfuric acid is used very commonly for acid pre-treatment to separate impurities of all kinds, including iron and calcium salts, protein, glutinous matter, coloring matter, dirt, etc. Amounts required are 0.5-5 per cent of 60° Be. sulfuric acid, based on the weight of fat, used as such or diluted with 4 parts of water; also 3 per cent of 45-50° Be. sulfuric acid, or 1-3 per cent of a mixture of 1 part of 66° Be. acid and 1 part of water. (One hundred parts of 60° Be. sulfuric acid equal 80 parts of 66° Be. sulfuric acid.) Ordinarily the fat and acid are boiled for an hour with open steam, allowed to settle, and the acidified water containing dirt and material causing turbidity, etc., is then drawn off. The oil is washed with hot water until on settling, the lower aqueous layer no longer gives an acid reaction when tested with litmus.

The oil can be tested for freedom from protein or glutinous material very simply. A small sample of the fat or oil is heated in a wide test tube to 280° C. Any protein or glutinous matter present will separate and appear as a turbid haze or cloud in the otherwise clear liquid.

The test for freedom from iron is the usual Prussian blue reaction. About 10 grams of sample are boiled with 10 cc. of iron-free hydrochloric acid which has been diluted with two volumes of water, in other words with 10 cc. of 1:2 hydrochloric acid. A small crystal of potassium ferrocyanide is added to the aqueous layer. If iron is present, the usual blue color appears.

Treatment with sulfuric acid generally leads to very good results. Since sulfuric acid is very inexpensive, this pre-treatment should be carried out whenever possible, using 0.5-5 kg. of 66° Be. acid per 100 kg. of fat or oil. Similarly 0.5-1 kg. of 40 per cent phosphoric acid are used per 100 kg. of fat. The loss of fat, oil or fatty acids with either acid pretreatment should be very small under the proper conditions of working and may actually amount to the original content of dirt, water and unsaponifiable matter in the crude fat. Josef Hetzer. *Seifensieder-Ztg.* **67,** 201 (1940).

Since peanut and okra oils can be hydrogenated advantageously under reduced pressure, olive oil and its fatty acids were also hydrogenated in the presence of Raney Nickel under various reduced pressures. The catalyst was introduced in an alcohol-ether suspension, and these solvents were removed in a vaccum through a Vigreux column. Hydrogenation at 180° C. and pressures of 20, 50, 100, 150, 250 and 380 mm. of mercury proceeded very slowly and the oil turned slightly brown. This may be due to greater resistance of oleic acid to saturation compared with that of more highly unsaturated acids in other oils. The iodine numbers show breaks of hydrogen absorption at

various stages which are thought to be caused by selective hydrogenation of the more highly unsaturated glycerides. R. Escourrov and P. Savary. *Bull. soc. chim.* **7,** 180-4 (1940).

Stabilized Oxygen Compounds

The addition of magnesium silicate and of water-soluble salts of amino organic acids to washing, cleaning, rinsing and bleaching products containing "per" compounds such as perborates or hydrogen peroxide, regulates the giving off of oxygen and makes it slow and uniform. The salts of amino organic acids, such as the sodium and potassium salts of iminodiacetic acid are used in a quantity that is a multiple of the quantity of magnesium silicate. E. g. A mixture of 10 parts of sodium perborate, 32 of soap, 12 of soda ash, 14 of $N(CH_2COONa)_3$, and 1 part of magnesium silicate forms an excellent textile washing agent. Henkel & Cie. G.m.b.H. French Patent No. 841,424.

Rug Cleaning

The first important operation in rug and carpet cleaning is the removal of dust. One of the earlier types of equipment used for this purpose was the gigantic rug wheel in which the rugs were carried up by slats and dropped. A type of equipment widely used in recent years is the rug beater in which a series of straps attached to a revolving drum beats the dust from the rug. Both of these methods subject the material to mechanical deterioration. A better method which has proved successful in one large plant is compressed-air treatment in which air is supplied under 75 pounds pressure. The compressed air is applied to the rug through a nozzle in the shape of a long slit, the rug being placed on a floor made with wire mesh. Several exhaust fans draw off the dust.

From this operation the rug is taken to conventional-type scrubbing floors, where it is given a thorough scrubbing treatment with soap or detergent solution, employing the common electrically driven rotary brushes. The next important step is to insure complete rinsing of soap from the rug. This is accomplished by the use of very large volumes of water delivered to the hose through a main of sufficient diameter to insure maximum nozzle pressure. The rug next passes through the large rollers of the wringer and is taken to the dry room. Normally a period of about four hours at 120° F. is sufficient for drying. Theaters and hotels have come to view the regular cleaning of rugs and carpets as an economy because of the reduction in replacement costs. *Laundry & Dry Cleaning J. of Canada,* **20,** No. 6, 16-18 (1940).

Liquid Soap Refining

Oils for liquid soap can be refined in the same way as edible oils. Usually a simple heat treatment is sufficient. This may be combined with washing either with water or steam as a final precaution. Liquid soaps are chilled and then filtered. The chilling throws down free fatty acids, albuminous impurities and other substances which are either in fine suspension or soluble only with difficulty. There is a good deal of difference of opinion concerning what might be termed the optimum degree of chilling, since good results have been obtained at many different temperatures. A good method is to cool to —20°C. then allow the soap solution to return slowly to 0°C. before filtering. This gives slightly better results than filtering at the first low temperature. *Am. Perfumer* **40,** No. 6, 56 (1940).

Mineral Oil Sulfonic Acids

Petroleum oils or mineral oils have a partly saturated partly unsaturated character and are always mixtures in which, according to their source, aliphatic, hydroaromatic or aromatic ingredients predominate. The products obtained in the preparation of the sulfonic acids of mineral oils show corresponding differences in their properties and possibilities of usefulness.

Mineral oil sulfonic acids are formed as by-products in the purification of petroleum oil with sulfuric acid, oleum or similar agents. Often mineral oil fractions are separated, such as those boiling over 200°C., which contain a high proportion of ingredients susceptible to sulfonation. Also condensation products or substances such as naphthenic acid amide and alcohols obtained from naphthenic acids are sulfonated. For this purpose not only concentrated sulfuric acid and oleum are used, but also dehydrating agents such as chloro-sulfonic acid.

Two kinds of sulfonic acids are formed in the sulfonation of mineral oils: Those which contain a small proportion of the sulfonic acid are soluble in water and in most organic solvents but their calcium salts are insoluble in water. Those which have undergone further sulfonation are insoluble in organic solvents but their calcium salts are soluble in water. Mineral oil sulfonic acids are used for various purposes including the preparation of emulsions and as wetting and cleansing agents in the textile industry. Josef Hetzer. *Chemiker-Z.* **1940,** 160-3; through *Deutsche Parfümerie Z.* **26,** 102-3 (1940).

Sodium Palmitate Curd

Soap curd is a felt of hydrated crystalline fibers enmeshing a mother liquor that is a slightly alkaline water with almost no soap. The fibers, although exceedingly fine, yield good x-ray patterns and are strikingly visible in the ultramicroscope. Ordinary solutes diffuse and sediment freely through their interstices. The mechanical structure of the felt is sufficiently firm so that sodium palmitate curd more concentrated than 0.2 Molar does not sediment or crush in a centrifugal field of 250,000 times gravity. This is likwise true of household soap, liquid crystalline sulfonic acid solution of 2 Molar, and of a potassium coconut-oil liquid crystalline neat soap.

The behavior of soap curd in the centrifuge is in accord with its brush heap structure, with greater or less orientation depending on its previous history. Glycerine softens the curd while sodium chloride makes it more rigid. James W. McBain and T. Foster Lord. *J. Am. Chem. Soc.* **62,** 866-9 (1940).

Darkening of Soap

A NUMBER of samples of curd soap were prepared in pairs at the same time. Each pair of samples, A and B, were kept for 6-7 months. The fatty acids used in making some of the soaps were obtained by splitting fat in an autoclave and using without further distillation. The soaps were bleached in the soap kettle with sodium hydrosulfite to reduce trivalent iron compounds when present.

Analyses showed:

	Fat Material	*% iron in the soap*	*Condition of the soap*
I	A 54% fatty acids..	0.0026	dark
	B Neutral fat only..	trace	light
II	A 62% fatty acids..	0.0019	dark
	B Neutral fat only..	trace	light
III	A 45% fatty acids..	0.0023	dark
	B Neutral fat only..	0.002	light
IV	A 64% fatty acids..	0.0018	dark
	B 45% fatty acids..	0.0015	reasonably light
V	A 40% fatty acids..	0.0026	dark
	B 39% fatty acids..	trace	reasonably light

Tests I, II and III show that soaps made from neutral fats are apt to contain less iron and will have a lighter color than soaps made from fatty acids. Test IV shows that of two soaps having about the same iron content, that containing the larger proportion of fatty acids can be expected to be darker in color. This shows that other factors affect color besides the amount of iron present. Test V shows that of two soaps having the same fatty acid content, that containing the larger amount of iron will have the darker color.

The darkening of soap on aging is attributed to oxidation processes. The causes are: Oxidation of coloring materials of an organic nature, including the natural fat color itself, and oxidation of divalent iron to trivalent iron, the latter giving dark brown compounds. Mykola Zajcev. *Seifensieder-Ztg.* **67,** 152 (1940).

Content of Sulfated Oils

One sample each of sulfated castor oil, sulfated neatsfoot oil, and sulfated cod oil was analyzed by the usual methods and fractionated into sulfated compounds, free fatty acids and neutral oil by Hart's method. The samples were commercial oils of a medium degree of sulfation. The fractions were examined by the usual methods for oxidation, unsaturation, hydroxylation, polymerization, etc.

It was found that: (1) The results of the fractionations agreed very well with those calculated from the analyses of the oils. (2) About 20 per cent of the combined SO_3 was lost during the fractionation, probably by thermal decomposition during removal of solvents. (3) Sulfation of castor oil occurred primarily at the hydroxyl group and secondarily at the double bond. Di-hydroxy acids were identified in the fatty acids recovered from the sulfated compounds. (4) Sulfation of neatsfoot oil occurred primarily at the double bonds of unsaturated acids. Monohydroxystearic acid was identified in the fatty acids recovered from the sulfated compounds. (5) Sulfation of cod oil occurred at the double bonds, preferentially of the more unsaturated acids. The fatty acids recovered from the sulfated compounds contained di-hydroxy acids, and mono-hydroxy unsaturated acids. (6) Free fatty acids and neutral oil fractions from sulfated castor oil and sulfated neatsfoot oil were very little oxidized. Those from sulfated cod oil were highly oxidized. (7) The neutral oil fractions contained large amounts of mono- and diglycerides. (8) Isoöleic acid was formed during the sulfation of neatsfoot oil. Robert M. Koppenhoefer. *J. Am. Leather Chem. Assoc.* **34,** 622-39.

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Damage to Cotton

The damage resulting to cotton during washing operations is both mechanical and chemical. These are distinguishable by means of a viscosimeter since the latter produces fluidity while the former does not. Mechanical damage is due to such factors as friction, wear, or mildew and results in loss in strength due to loss of material and breaking of fibers. Chemical damage comprises that brought about by the attack of mineral acids or salts, resulting in chemical action such as hydrolysis to produce hydrocellulose and oxycellulose of both the acidic and reducing types. The type of chemical damage may be determined by such tests as methylene blue absorption, copper number, loss in weight when boiled in dilute alkali, and fluidity. A. V. Wendling. *Chemistry and Industry* **59,** 255 (1940).

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Commercial Palm Oils

Two palm oils, differing in their respective contents of palmitic and oleic acid, were examined. A plantation oil from the Cameroons had the following component acids: Myristic 1.1, palmitic 45.1, stearic 4.1, hexadecenoic 0.8, oleic 38.6 and linoleic 10.3 per cent by weight. A native oil from Grand Bassa had component acids: Myristic 0.6, palmitic 37.6, stearic 3.7, hexadecenoic 1.4, oleic 50.3, and linoleic 6.4 per cent by weight. The chief components in commercial palm oils are oleo-dipalmitin and palmitodi-olein, in amounts which vary according to the proportions of palmitic, oleic, and linoleic acids in the whole fats; together, these glycerides amount to 70-75 per cent of the palm oil. T. P. Hilditch and L. Maddison. *J. Soc. Chem. Industry* **59,** 67-71 (1940).

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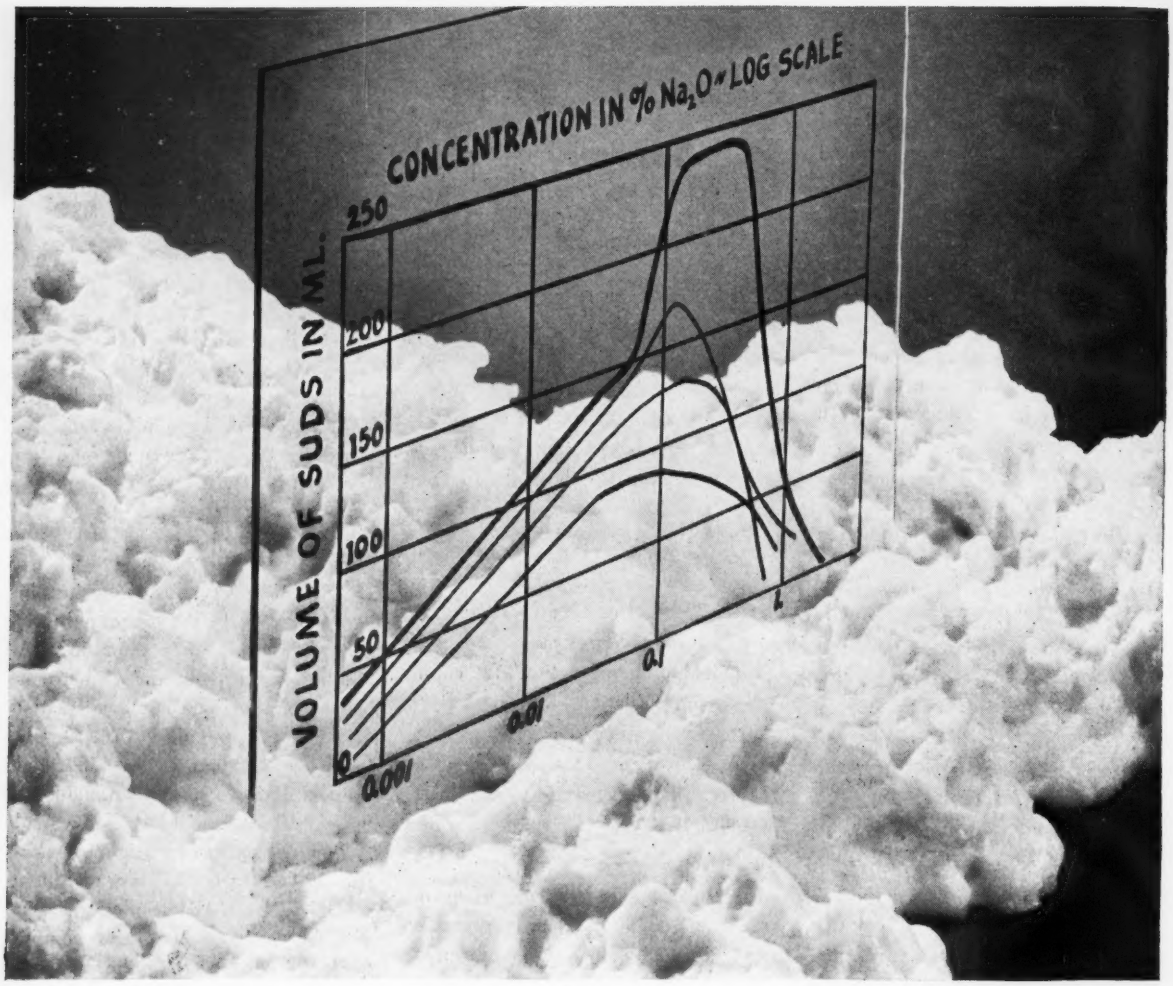
Oil Refining by Freezing

Free acids are separated from cottonseed, sunflower and soybean oils by freezing at —20° C. to —38° C. for 1.5-24 hours. The mixed acids are then dissolved in naphtha and chilled at —20° C. to separate solid saturated acids and liquid unsaturated acids. The solid fraction can be used in soap making and the liquid fraction in the production of alkyd lacquers. A. Ya. Drinberg and V. V. Zhebrovskii. *Org. Chem. Ind.* (U.S.S.R.) **6,** 327; through Chem. Abs.



*

PQ SILICATES YIELD "MOUNTAIN HIGH" SUDS

● **HERE'S** a rising curve you want to see when measuring the sudsing efficiency of your soaps and detergents. The silica or SiO_2 in PQ Silicates aids you to build detergents and soaps that yield a larger amount of suds than any other of the materials ordinarily added to soap.

The above graph is one of many evidences that the function of silica in increasing suds is distinct from that of alkali. May we show you further proof of PQ Silicates' sudsing potency and maximum soil removing power?

*Suds formed on an 0.0088 per cent Sodium Stearate solution vs. units of alkali, showing Silica effect. Top curve, Sodium Silicate. Other three curves, non-silicated alkalis.

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33 GRADES FROM $3Na_2O$, $2SiO_2$ to Na_2O, $3.9SiO_2$

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Works: Anderson, Ind., Baltimore, Md., Chester, Pa., Buffalo, N.Y., Kansas City, Kans., Jeffersonville, Ind., Rahway, N. J., St. Louis, Mo., Utica, Ill.

Products and Processes

Synthetic Fatty Acid Soaps

Soap preparations contain soaps of synthetic fatty acids obtained by oxidation of high molecular non-aromatic hydrocarbons such as crude paraffin wax blown with air in the presence of 0.1 per cent of potassium permanganate for 14 hours at 110° C. In addition they contain one or more of the following: Pyrophosphates, secondary orthophosphates, metaphosphates, or sesquicarbonates of the alkali metals or of ammonia, or borax. Others of the usual inorganic additions favoring washing powder may also be present. Standard Oil Development Co. and I. G. Farbenindustrie A.-G. British Patent No. 509,730.

Surface-active Material

A mixture of lime-resistant surface-active organic materials contains a higher aliphatic residue, a terminal water-soluble group, sodium pyrophosphate, and a water-soluble salt of an aromatic sulfonic acid. In an example, 45 parts by weight of a technical sulfonate of a fatty alcohol, 25 parts of calcined sodium pyrophosphate, and 30 parts of sodium naphthalenesulfonate are stirred together during the addition of water. Henkel & Cie. G.m.b.H. German Patent No. 685,428.

Neutral Cleansing Agents

Inorganic bleaching and caustic detergent additions are of only minor significance in replacing soap. Organic fat-digesting preparations obtained from the pancreatic gland of animals are useful in the preliminary or soaking stage of washing. They loosen protein and perspiration materials in the soil without attacking the fabric itself. The loosened particles of dirt are then easily removed and the fabric cleaned completely with the use of very dilute soap solutions.

The type of product of oleyl lysalbinic acid, a combination of fatty acid and protein, is of special importance as a soap-sparing washing agent. Such condensation products combine the properties of a protective colloid due to their protein fraction, and of surface-active materials, due to their fatty acid fraction. They can be said to be similar to soap in some ways, but are stable toward calcium and magnesium salts. Although the fat content is only one-fourth that of soap it is possible for them to exceed soap in detergent action. The necessary protein material can be obtained from otherwise worthless waste matter. D. W. Obst. *Allgemeine Oel- und Fett-Ztg.* **37,** 108-9 (1940).

Surface-active Agents

The minimum requirements of a good detergent include a number of factors such as wetting power, emulsification, deflocculation, stability, etc. As most surface-active compounds are specific in their action and seldom combine all of the requirements in good balance, it is often necessary to assist a detergent by the use of wetting and dispersing agents which have one or both of these functions but are relatively ineffective in washing. This is illustrated by various typical surface-active compounds and detergents such as sulfated methyl oleate, dialkyl naphthalene sodium sulfonate, sodium lauryl sulfate and soap. High wetting power appears to be chemically associated with medium-length fatty chains or cyclic rings, plus polar groups, while washing effectiveness is characteristic of long-chain polar compounds. C. J. S. Warrington. *Chemistry and Industry* **59,** 255 (1940).

Sulfonated Petroleum

A sulfonated oil suitable for use as an emulsifying agent is made by mixing 90-60 per cent of a petroleum oil with 10-40 per cent of an aromatic hydrocarbon selected from the group consisting of benzol, toluol and diphenyl. The mixture is heated with a sulfonating agent to form petroleum hydrocarbon-aromatic sulfonic acids. Water is added to the resultant material and the mixture is allowed to stratify, the intermediate sludge-like layer being separated. An excess of caustic soda is added to the separated sludge-like layer to form sodium salts of the petroleum hydrocarbon-aromatic sulfonic acids. Texaco Development Corp. Canadian Patent No. 388,126.

Fats from Carbohydrates

Fats are produced by bringing carbohydrates such as lactose, sucrose, starch, glucose, into contact with fresh animal albuminous pulp, e. g., herring pulp, in the presence of a quantity of water that does not materially exceed the minimum required for interpenetration, the pH being maintained at or near the neutral point and the fat formed being separated. A mixture of chlorides such as sodium chloride, potassium chloride, calcium chloride, and magnesium chloride, in which sodium chloride predominates, may be added and buffer substances may be used. Karl Brandt. British Patent No. 509,755.

Sulfonation Process

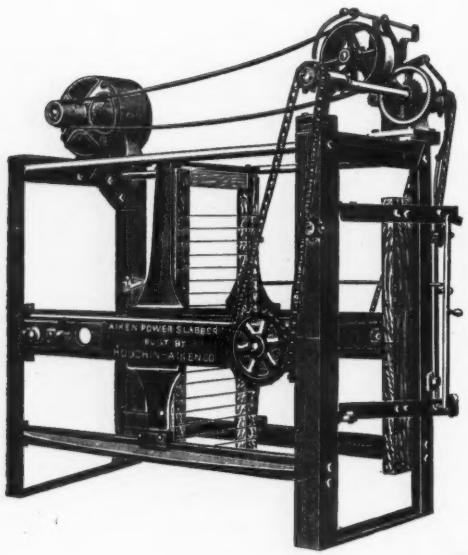
A continuous process of sulfonation brings together continuously flowing streams of a sulfonating agent and an aliphatic alcoholic hydroxy compound with the full proportions required for the desired degree of sulfonation. The mixture is allowed to react during its flow without substantially restraining the rise of temperature due to chemical reaction. The reaction mixture is continuously delivered to a reaction-arresting treatment. Proctor & Gamble Co. of Canada, Ltd. Canadian Patent No. 389,490.

Recovery of Wool Fat

Wool fat is recovered from wool wash waters by treating them with acid at a temperature not over 15°C. The fatty sludge formed is filtered hot. S. N. Semenov, S. A. Dmitriev, T. A. Blagova and V. V. Khovrin. Russian Patent No. 52,323.

TWO HOUCHIN CUTTING MACHINES PREFERRED BY LEADING MILLS

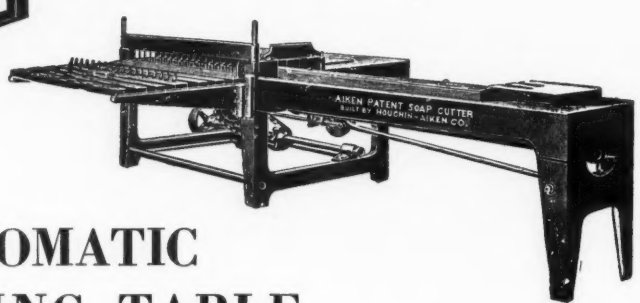
Installed together these two soap machines comprise a complete cutting outfit.



HOUCHIN AUTOMATIC POWER SLABBER

slabs the soap, ejects the slabbed frame and returns head to slabbing position to receive the next frame.

Every part of this machine is constructed of iron or steel, and is arranged for either belt or individual motor drive.



THE H. A. AUTOMATIC POWER CUTTING TABLE

will cut soap for oblong, oval or octagon cakes. Heads containing the cutting wires are easily removed when it is desired to change the size or shape of the cakes. Capacity 60 to 100 frames of soap per day.

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No. 2,202,973, Soap Product, patented June 4, 1940 by Charles T. Walter, Chicago, Ill., assignor to Industrial Patents Corporation, Chicago, Ill. A new soap product consisting of individual tubular sections approximately .07 to .09 inch in diameter, having soap walls approximately .0035 inch to .0055 inch in thickness.

No. 2,202,974, Ribbon Soap, patented June 4, 1940 by Charles T. Walter, Chicago, Ill., assignor to Industrial Patents Corporation, Chicago, Ill. A ribbon soap product in which the component particles are collapsed soap tubes with a continuously smooth surface, having arcuate edges, sufficiently large to readily appear to the eye as individually distinct particles of reasonably uniform size and shape, and sufficiently small to constitute necessarily a bulk soap product of such character that the component particles are used in mass rather than as separate entities, and consist of a collapsed soap tube solidified into a characteristic arcuate edged ribbon, whereby chipping at the edges and the consequent production of dust-like matter is obviated, in which product the individual particles comprise appreciable amounts of soap so that the respective particles are individually distinct bodies capable of ready, independent, relative movement and ready separation upon introduction into water, are capable of attaining practically immediate contact with water upon being dropped upon the surface thereof, and of maintaining their independent identity without sticking together to form masses of undissolved soap, and are large considering the amount of soap contained therein to thereby present an available surface area which is large relative to the amount of soap in the particle, whereby the soap product is free from any substantial characterizing amount of powder or dust-like matter, is soluble with particular readiness, speed and completeness, and is characterized by a total absence of any tendency to form lumps, balls or spots of undissolved soap in washing.

No. 2,203,431, Fungicide, patented June 4, 1940 by Marion C. Goldsworthy, Takoma Park, Md.; dedicated to the free use of the People in the territory of the United States. A fungicide containing as its essential active ingredient 2.4 diamino-diphenylamine.

No. 2,203,443, Detergent, patented June 4, 1940 by John Ross, New York, N. Y., and Joseph Edward Mitchell, Jersey City, N. J., assignors to Colgate-Palmolive-Peet Company, Jersey City, N. J. In the process of removing unsulphonated material from the reaction product of a sulphonating agent and an organic material soluble in a liquid solvent of the class consisting of liquid sulphur dioxide and water immiscible mixtures containing liquid sulphur dioxide, the steps which comprise treating the product with liquid sulphur dioxide and removing the liquid sulphur dioxide containing the unsulphonated material.

No. 2,203,696, Detergents, patented June 11, 1940 by John F. Olin, Grosse Ile, Mich., assignor to The Sharples Solvents Corporation, Philadelphia, Pa. A process of manufacturing detergents comprising partially chlorinating a paraffin hydrocarbon fraction to produce a mixture of alkyl monochlorides with unreacted paraffins which is substantially free of polychlorides, subjecting the mixture to a splitting reaction and thereby converging the alkyl monochlorides to olefins, treating the mixture of olefins and paraffins so produced with a sulphonating agent to produce a detergent composition by reaction of the sulphonating agent with the olefins of the mixture and thereafter removing the unreacted paraffins from the detergent.

No. 2,203,744, Insecticide, patented June 11, 1940 by Charles H. Peddrick, Jr., Northville, N. Y., assignor to Feldspathic Research Corp., New York, N. Y. An insecticide comprising a finely divided mineral selected from the class consisting of pyrophyllite, bauxite, alunite and topaz, the individual particles of which contain a partial coating of aluminum fluoride.

No. 2,203,919, Insecticide, patented June 11, 1940 by Donald F. Murphy, Bristol, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa. An insecticidal composition comprising an organic thiocyano compound and derris root.

No. 2,204,009, Insecticidal Agent, patented June 11, 1940 by Herman A. Bruson, Philadelphia, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa. A parasiticidal spray containing a dispersible composition comprising the reaction product of polyglycerol, a resin-forming, dicarboxylic acid and an acid selected from the group consisting of monobasic, aliphatic acids which are not of the drying type and which possess at least 8 carbon atoms, monobasic aliphatic acids, having at least 8 carbon atoms, the chain of which is interrupted by an oxygen atom, and cycloaliphatic acids, the reaction product having an acid number less than fifteen.

No. 2,204,433, Detergent, patented June 11, 1940 by Fred Weaver Muncie, New Brunswick, N. J., and Kenneth L. Russell, New York, N. Y., assignors to Colgate - Palmolive - Peet Company, Jersey City, N. J. As a new composition of matter, a chemical compound consisting of beta methyl glycerine, one hydroxy group of which has been esterified by a long-chain fatty acid and another hydroxy group of which has been replaced by a sulphonate radical.

No. 2,204,511, Insecticide, patented June 11, 1940 by Anderson W. Ralston and James Harwood, Chicago, and Ervin W. Hopkins, Hinsdale, Ill., assignors to Armour and Company, Chicago, Ill. An insecticide containing as its essential active ingredient a compound chosen from the group consisting of dioctyl amine and its salts.

No. 2,205,115, Silver Polish, patented June 18, 1940 by Delbert F. Brown, Westfield, and Hugh C. De Hoff, Roselle Park, N. J., assignors to Standard Oil Development Company. A cleaning and polishing emulsion having approximately the following composition: about 15 to 50 per cent of a low molecular weight aliphatic alcohol, about one-half to 2 per cent of gum tragacanth, about 1 to 5 per cent of an oil, about 5 to 25 per cent of light finely-divided abrasive powder, and the balance water.

No. 2,205,232, Insect Repellent, patented June 18, 1940 by Wendell H. Tisdale, Wilmington, Del., and Ira Williams, Woodstown, N. J., assignors to E. I. du Pont de Nemours & Company, Wilmington, Del. A repellent for chewing insects comprising a thiuram sulfide as an active ingre-

(*Turn to Page* 121)

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New Equipment

IF YOU want additional information on any of the items described below or if you want any of the bulletins, catalogs, etc., write to the MacNair-Dorland Co., Inc., 254 West 31st St., New York, mentioning the number of the item.

723—Pigment Paste Wax

Windsor Wax Co., New York, has recently issued a folder describing its new product, "Windsor" Pigment Paste Wax. The pigmented wax comes in six colors. It can be used, it is said, for cement, stone, magnesite, special composition and painted floors. The idea of adding pigments to floor wax is, of course, to eliminate the need of frequent repainting and "touching up" worn areas, by applying color each time the floor is waxed.

724—TSPP Booklet

American Cyanamid & Chemical Co., New York, is currently distributing a 12-page booklet on the properties and applications of "Aero Brand" TSPP. The mild alkalinity of tetra sodium pyrophosphate, when compared with other common alkalies, it is claimed, makes it useful in the washing of wool, silk, and artificial silk. It is also told how the addition of TSPP to soaps, dishwashing compounds, and trisodium phosphate increases their value as emulsifiers and water softening agents.

725—Christmas Packaging

Hinde & Dauch Paper Co., Sandusky, Ohio, is again offering free copies of its improved book on Christmas packaging. In a new section of the book, 15 new ideas in Christmas packages are illustrated and described.

726—Dry Chemical Feeder

Permutit Co., New York, water conditioning, has just completed an illustrated bulletin which describes Permutit's new oscillating type dry chemical feeder. A curved feed plate oscillates beneath the mouth of the feed spout and discharges chemicals to a mixing tank at a rate proportional to the rate of water flowing. An agitator in the hopper is said to prevent "arching", and the operating mechanism is enclosed to make the feeder dust proof.

727—Perfume Catalogue

"Perfume Specialties" is the name of the latest catalogue issued by P. R. Dreyer Inc., New York. Perfume oils are listed according to the product in which they are to be used. There are listings of odors for shaving soap, toilet soap, liquid soap, shampoo, utility soaps, fly sprays, etc. Directions for use are included in the catalog.

728—Colored Corrugated Board

United Container Co., Philadelphia, has just brought out a new type of corrugated board known as "Colorgated." Patterns and finishes in many colors may be printed directly on the corrugated board, which is well adapted for packaging soaps.

729—Sulfur Bulletin

Freeport Sulphur Co., New York, has recently issued another number of the bulletin, "Brimstone Brevities," containing original articles on the use of sulfur in the control of insect pests and plant diseases. The control of bacterial crown gall, the tomato and potato psyllid, lime-induced chlorosis, coccidiosis, the leaf-hopper, cabbage worms and cabbage aphids, are some of the subjects covered in the booklet. The use of sulfur with derris, nicotine and lime as an insecticide is also described.

Kingzett's Chem. Encyclopedia

The sixth edition of this general chemical reference book, has just been released by the publishers, D. Van Nostrand Co. The last previous edition appeared in 1932. The original author, C. T. Kingzett, has since died, and the current edition has been compiled by Dr. Ralph K. Strong. Recent rapid advances in all branches of chemical science have made necessary a considerable expansion in the size of the present edition which reaches to almost 1100 pages. A great deal of work has been necessary in bringing up to date the hundreds of references. To judge by observations on such topics as soaps, waxes, disinfectants, insecticides, etc., much of this work is still far behind. Household insecticides are but scantily mentioned, the Rideal-Walker test is described as the sole testing method for disinfectants, while castile soaps are described as hard soaps "used for making pills and plasters." The difficulty of treating authoritatively such a wide variety of chemical topics is admitted, yet the book's deficiencies in dealing with sanitary chemical specialties is still not quite understandable.

Whale Oil—Economic Analysis

By Karl Brandt. This 264-page text just issued by the Food Research Institute, also publishers of "Copra and Coconut Oil" (1928) and "Inedible Animal Fats in the United States" (1929), reviews the position of whale oil in the world fat picture. Modern production methods are set against a background of the early whaling days, with consumption trends in various consuming industries completing the picture. Use of whale oil by the soap industry is reviewed and the comparatively sharp increases in consumption by British and German soapers in recent years are contrasted with the relatively minor and unchanging use by American soapers.

Advertise "Laco" Shampoo

Laco Products, Inc., Waltham, Mass., has recently introduced an advertising offer of "Laco" shampoo and Castile soap combined—a "45-cent value"—for 29 cents. Joseph Katz Co. is handling the account.

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Laundry Chemistry, by Harvey. A practical book dealing with basic principles of laundry chemistry. Of use to suppliers of laundry materials as well as laundry operators. $1.75.

Our Enemy—The Termite, by Snyder. The termite is treated from the economic as well as the entomological point of view in this book based on the author's 26 years of study of termites and methods for their control. Practical control methods and termite proof construction are discussed in detail. 196 pages. $3.00.

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Comments on Old-Time Soaps

MOTTLED soaps and "Old Brown Windsor" soap as manufactured in England years ago were not produced in these forms deliberately as is the case today. Difficulties with pure raw materials were the original causes of these types of soap, according to a communication from J. Hart-Smith of Bournemouth, England, to the authors of "Modern Soap Making." Dr. E. G. Thomssen and C. R. Kemp. Commenting on mention of these soaps in this book, Mr. Hart-Smith states: "Mottled Soaps—Caustic soda free from iron was expensive and so for ordinary household soaps it was not used in every case. Now, if iron be present a blue soap is produced and if the soap be thoroughly boiled, the mottling is uniform throughout. But if too much water is left in these soaps, the blue soap settles to the bottom. A uniform mottled soap was therefore economical and for this reason became popular. Later it was found that by the addition of certain chemicals, much water could be left in the soap and yet a uniform mottling could be obtained. (I suppose you have heard the definition of a soapmaker as a man who can make a yard of water stand on end.) Now, iron-free caustic soda can be obtained and so a mottled soap is now by some regarded with suspicion."

In regard to "Old Brown Windsor," Mr. Hart-Smith states: "There was difficulty in obtaining soap free from alkali and so an excess of fat was used. This excess fat after a time became rancid and the soap was reboiled. This was repeated until the excess alkali was neutralized. During these reboilings, the soap became brown. After the last reboiling, perfume was added and thus was produced a most popular toilet soap. Modern "Old Brown Windsor" is of course not produced in this way and like mottled soaps is simply an instance of trading on a past well-verified reputation.

Commenting on the description of the manufacture of transparent soaps in the book, Mr. Hart-Smith writes: "You state that 'part of the alcohol was then drawn off.' This alcohol was of course used again and again, and it was found that after it had been used for a number of times in making transparent soap that it had become practically odorless, and was sold at high prices to makers of the finest grades of perfumes. The alcohol was naturally pure ethyl alcohol and not methylated spirit or industrial alcohol."

—— ♦ ——

Soap Solubility Test

A method for determining the relative solubility of a soap cake was worked out with the aid of very simple apparatus. The soap to be tested was cut into small pieces and packed closely into a porcelain crucible, the outer surface at the top of the crucible being scraped smooth with a knife. The crucible was then inverted in a funnel fitted with filter paper such as to filter rapidly, and the funnel was placed in the neck of a liter volumetric flask. The funnel was filled with distilled water and kept filled until enough of the solution had run into the flask to reach the liter calibration mark. The soap content of the solution was then determined by finding the fatty acid content.

To 100 cc. of the solution 2-3 drops of methyl orange were added and 25 per cent sulfuric acid to the appearance of a red color. Extraction was made with 25 cc. of ethyl ether or petroleum ether and the extracted fatty acids determined in the usual way. Since the result is very low a double determination is advisable. From the per cent of fatty acid in the soap one can calculate by a simple proportion the soap content of 1 liter. Since the surface of the soap can be calculated from the diameter of the top of the crucible, by a further proportion the amount of soap dissolved per 100 square centimeters of surface can be calculated. This gives a means of standardizing solubility measurement and of comparing the results with different types of soaps under the same conditions. The conditions naturally have to differ from those when soap is used practically, since in the latter case too many uncontrolled variables are involved. *Seifensieder-Ztg.* **67,** 212-13 (1940).

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Standard Aqueous Alkali

In determining the saponification value of fats and oils, standard alcoholic alkali solutions have ordinarily been used. These are not only troublesome and time-consuming to prepare but change their value so rapidly that they must be restandardized or freshly made at very frequent intervals. Aqueous alkali can be used instead.

When a measured amount of standard aqueous alkali solution is added to a quantity of neutral alcohol and the solution is boiled with a reflux condenser for an hour or more and then titrated to the phenolphthalein end point with standard hydrochloric acid, it will be found that somewhat less acid is required than that demanded by the alkali added. While twirling the flask at this point, streaks of red will be seen moving toward the center of the bottom of the flask, and upon standing, the solution will acquire a darker tint. If a slight excess of acid is now added, the solution boiled for 15 minutes and then titrated to the end point, it will be found that the exact equivalent of acid has been required.

In carrying out an analysis, the oil is dissolved in sufficient neutral alcohol so that a clear solution results after the addition of the standard alkali. Boil with a reflux condenser in the usual manner, titrate to the end point and add an excess of 10 cc. of acid. Boil for another 15 minutes and titrate to the end point. George Lang. *The Chemist-Analyst* **29,** 39 (1940).

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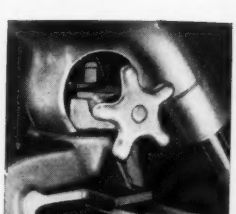

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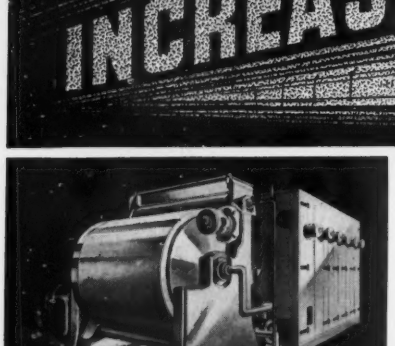

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NEW PROCTOR *Flake Soap* SYSTEM

Synthetic Fatty Acids

(*From Page* 32)

affine. Moderne fettchemische Technologie, Vol. 2, Verlag J. A. Barth, Leipzig 1940.

[2]Wittka, F., see (1) page 3.

[3]Schrauth, W. Chemiker Zeitung, *63*, 274 (1939).

[4]Fischer, F. u. Pichler H., Ber. *72*, 327 (1939).

[5]Imhausen, A., Chemiker Ztg., *62*, 213 (1938).

[6]Rieche, A., Zeitschr. angew. Chemie, *51*, 707 (1938).

[7]Criege, R., Zeitschr. angew. Chemie, *50*, 153 (1937).

[8]Wietzel, G., Fette u. Seifen, *46*, 24 (1939).

[9]Bauschinger, Cl., Fette u. Seifen, *45*, 628 (1938).

[10]Wietzel, G.. Zeitschr. angew. Chemie, *51*, 535 (1938).

[11]Imhausen, A., Kolloid Zeitschr., *85*, 234 (1938).

[12]Wittka, F., see (1) page 15.

[13]See SOAP, *1939*, August, page 67.

[14]Wittka, F., Seifensieder-Ztg., *66*, 668 (1939).

[15]Jantzen, E., Rheinheimer, W. and Asche. W., Fette u. Seifen, *45*, 388 (1938).

[16]French Patent 832,546, 1937; 833,-064, 1938; Henkel & Co.

[17]Brit. Patent 478,317, 1936; Am. Patent 2,095,473, 1936; I. G. Farben Ind.

[18]DRP. 490,243, 1923; 543,109, 1929; I. G. Farben Ind.

[19]Brit. Patent 337,130, 1929; I. G. Farben Ind.

[20]Wittka, F., see (1), page 73.

[21]Rennkamp, F., Hoppe-Seyler, *259*, 235 (1939).

Rosin Soap Color

The primary gum acids in rosin in their original state contribute little color to rosin soaps, but some are so unstable toward heat and oxygen that color-producing acids are always found in rosins made from gum collected and processed in the usual manner. Tests indicate that the acids most unstable to heat and oxygen are associated with the resin acids that crystallize readily from the gum rather than those that do not, and that the resenes are stable toward heat and exposure. Abietic and abietic-type acids give an orange color to rosin soap. Some of the crystalline-type rosin acids are converted to abietic-type acids when heated. Normal gum rosin does not appear to be 90 per cent abietic acids as has been supposed.

The resinates of iron, aluminum and zinc are negligible factors in contributing to the color of rosin soap. The presence of scrap or oxidized rosin and rosin acids increases the color rosin gives to soap. Aging tests showed that after the first month the rosin soap cakes changed color slowly. Changes in the following months involved an appreciable darkening of the lighter samples except in the case of the white rosin soap made with pyroabietic acid. W. D. Pohle and C. F. Speh. *Oil & Soap* **17,** 100-6 (1940).

Oil of Amoora Rohituk

Huge quantities of seeds are available from a middle-sized evergreen tree which grows in India. The oil extracted from the seeds is reddish brown in color and has the following constants: sp. gr. at 22°C. 0.928, saponification value 194.6, Wij's iodine number 113.2 and 1.46 percent of unsaponifiable. The oil has an unpleasant odor. It does not deposit any solid matter on standing in the cold, and contains a fairly high percentage of rosin. Colored soap can be made from the oil. N. C. Deb. *Indian Soap J.* **6,** 223-5 (1940).

Conjugated Sunflower Oil

Sunflower oil containing oleic acid 30.3 per cent, linoleic acid 61.4 and saturated acids 8.6 per cent, was hydrogenated in the presence of a nickel catalyst by means of methyl alcohol, ethyl alcohol, propyl alcohol, isobutyl alcohol and isoamyl alcohol. The products approximated olive oil in composition. Hydrogenation of oil in the presence of isopropyl alcohol yielded a product containing saturated acid 11.1, oleic acid 60.5, isoöleic acid 16.5 and linoleic acid 11.9 per cent. The yield of acetone was in this case 72.5 per cent. V. A. Rush and K. L. Dvinyaninova. *J. Applied Chem.* (U.S.S.R.) **12,** 1060-63; through *Chem. Abs.*

Acid Emulsifying Agent

The product of the acid hydrolysis of wood pulp is treated with alkali and then acidified with an inorganic acid. L. N. Mednikova. Russian Patent No. 52,312.

Fat Components

Baku kernel fat (*Mimusops Heckelii*) contains as component fatty acids: Palmitic 4.4 per cent by weight, stearic 36.0, arachidic 0.5, hexadecenoic 0.3, oleic 58.5, and linoleic 0.3 per cent. The component glycerides of the fat, determined by study of three fractions of differing solubility obtained by crystallization from acetone, are approximately stearodiolein 41-47 per cent, oleodistearin 32-26, palmitodiolein 14-6, triolein 10-12, oleopalmitostearin 2-8, and fully saturated palmitodistearin 1 per cent. This solid seed fat demonstrates that, except when the "rule of even distribution" is very closely followed, the component glycerides of a fat cannot always be deduced simply from a knowledge of the proportions of its component fatty acids. D. Atherton and M. L. Meara. *J. Soc. Chem. Ind.* **59,** 95-6 (1940).

Iodine Number with Bromine

Iodine number is determined without iodine by treating the fat sample with a solution of bromine in methyl alcohol and titrating excess halogen with arsenite. Weigh 0.1-1.0 gram of fat sample, according to the expected iodine number, dissolve in 10 cc. of chloroform and add 25 cc. of a solution prepared by adding 5.2 cc. of bromine to 1 liter of a solution of 120-150 parts of sodium bromide in 1000 parts of methyl alcohol. Allow to stand for 30 minutes, or 2 hours for highly unsaturated fats. Add 3 cc. of concentrated hydrochloric acid and 100 cc. of distilled water and titrate with a solution prepared by dissolving 4.9 grams of arsenic trioxide with the minimum amount of potassium hydroxide, about 2 grams, making up to 1 liter and adding 0.5 gram of methyl red. The arsenic solution is standardized against 0.1 Normal sodium bromate using hydrochloric acid and excess sodium bromide to set free a known amount of bromine, which is then titrated as described above. The method gives substantially the same results as the Hanus or the Kaufmann iodometric methods. H. P. Kaufmann. *Fette und Seifen* **47,** 4-5 (1940).

Analysis of Soap Mass

To two separate weighings of 2 grams each of soap mass add 10 cc. of alcoholic 0.5 Normal potassium hydroxide solution and 20 cc. of alcohol and reflux on a water bath until dissolved. Introduce into each flask 20 cc. of water to dissolve the sodium carbonate and cool. Determine sodium carbonate plus potassium hydroxide in one flask by titration with 0.1 Normal hydrochloric acid and phenolphthalein. To another flask add 25 cc. of 10 per cent barium chloride to precipitate soap and sodium carbonate and titrate the excess of potassium hydroxide with hydrochloric acid. The difference between the two determinations gives sodium carbonate. To determine free fatty acids, treat a 5 gram sample with 30 cc. of alcoholic 0.2 Normal fatty acids of molecular weight 290.29, which is close to the molecular weight of free fatty acids to be tested, add 20 cc. of water to obtain a 60 per cent alcoholic solution, reflux, cool and determine the excess of acids by titration with 0.2 Normal sodium hydroxide solution. L. Bliner and A. Repin. *Masloboino Zhirovoe Delo* **15,** No. 6, 27-9; through *Chem. Abs.*

Castor Oil Soapstock

The usual methods of determining free and combined fatty acids cannot be used because the oil is soluble in alcohol and insoluble in ether. Satisfactory results with castor oil soapstock can be obtained by the following method: To 5 grams of soapstock in a porcelain evaporating dish add a minimum of water (about 5 cc.), heat with stirring on a water bath and neutralize with dilute sodium hydroxide solution. To convert the sodium soap into insoluble calcium salts, introduce dropwise 10 per cent calcium chloride solution until the formation of a milky solution stops and the bottom aqueous layer becomes entirely clear. Evaporate to dryness, work up with hot alcohol, filter, wash the precipitate in the filter with alcohol and determine neutral castor oil in the filtrate as usual. Determine combined fatty acids from the difference of the total content of fatty acids, determined in the usual manner, and the nuetral oil. G. Shuraev and A. Vasil'eva. *Masloboino Zhirovoe Delo* **15,** No. 6, 27; through *Chem. Abs.*

Hemp Oil Acidity Reduced

The acidity of crude hemp oil was reduced from 12-18 to 0.25-0.35 mg. caustic potash by treating it with the theoretical proportion of 16-17° Be. caustic soda at 30° C. for 25-30 minutes and adding 1 per cent of solid sodium chloride at 50° C. The stirring is continued for an additional 15-20 minutes, the settled oil is decanted from the soapstock and is washed 4-5 times at 85-90° C. The refined oil is vacuum-dried at 90° C. for 3-4 hours. The soapstock is stirred with 5 per cent of crystalline sodium chloride at 65° C. and the oil is recovered as above. A. Boricheva. *Mastoboino Zhirovoe Delo* **15,** No. 6, 10; through *Chem. Abs.*

Mixed Esters

Esters suitable for use as substitutes for soaps, Turkey-red oils, sulfonated alcohols, etc., are produced by treating triricinolein with maleic acid, maleic anhydride or maleyl chloride to produce an acid ester and then treating the acid ester with glycerine to produce a neutral ester, and sulfonating the product with a bisulfite. Melvin De Groote. U. S. Patent No. 2,184,794; through *Chem. Abs.*

Slag In Oil Refining

The application of ground slag, 0.01-0.8 mm. in size, to the refining of oils, fats and waxes is suggested. The calcium silicates in the slag absorb acid resins and other substances in colloidal form which affect the taste and color of the material being refined. E. Belani. *Montan. Rundschau* **31,** 303-5; through Chem. Abs.

Rapid Hydrogenation

The rate of hydrogenation of fats can be considerably increased if the stirring is increased to 5,000 revolutions per minute and the activity of the nickel catalyst is enhanced by reduction in oil in the minimum of time. The optimum conditions for reduction are conducting hydrogen at a rate of 300-500 liters per minute per kilogram of nickel and raising the temperature to 200°C. in 17 minutes and holding at 200-240° for 1 hour. D. Dobychin and S. Roginskii. *Masloboino Zhirovoe Delo* **15,** No. 6, 13-15; through Chem. Abs.

Catalyst Treatment

In the recovery of nickel catalyst by precipitation with calcium carbonate and solution of the aqueous suspension of the nickel carbonate in sulfuric acid, the use of steam can be eliminated by treating the moist nickel carbonate filter cake with concentrated sulfuric acid. The exothermic reaction is completed at 70-90°C. without additional heating. D. Shlifer. *Masloboino Zhirovoe Delo* **15,** No. 6, 15; through Chem. Abs.

Pyrophosphate in Soap

Tetrasodium pyrophosphate, when it constitutes 10-15 per cent of the soap mixture, saves soap to the extent of 20-30 per cent by preventing the magnesium ion from precipitating soap. A higher proportion of pyrophosphate will result in a partial elimination of the calcium ion also. More soap is thus made available for washing and dispersing the solids and less insoluble material is present to complicate the removal of dirt, which results in better washing liquids at no additional cost. Joseph Janota and Harry H. Hull. *Oil & Soap* **17,** 96-100 (1940).

Phosphate Ester Detergent

A washing and cleaning agent is composed of a water-soluble salt of a pyrophosphoric acid ester of a high molecular-weight alcohol and a portion of the unreacted alcohol. The pyrophosphoric acid and the alcohol are mixed at 85-115° C. until maximum esterification has taken place, after which the product is neutralized to form a water-soluble salt. Karl Butz, to Am. Hyalsol Corp. U. S. Patent No. 2,190,769.

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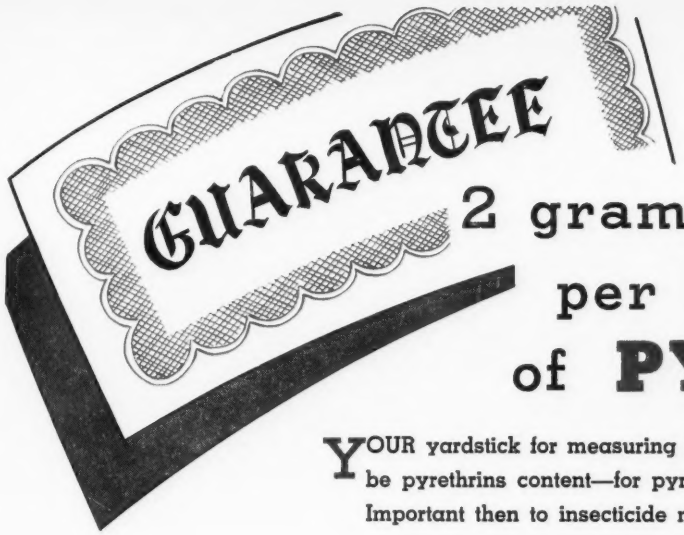

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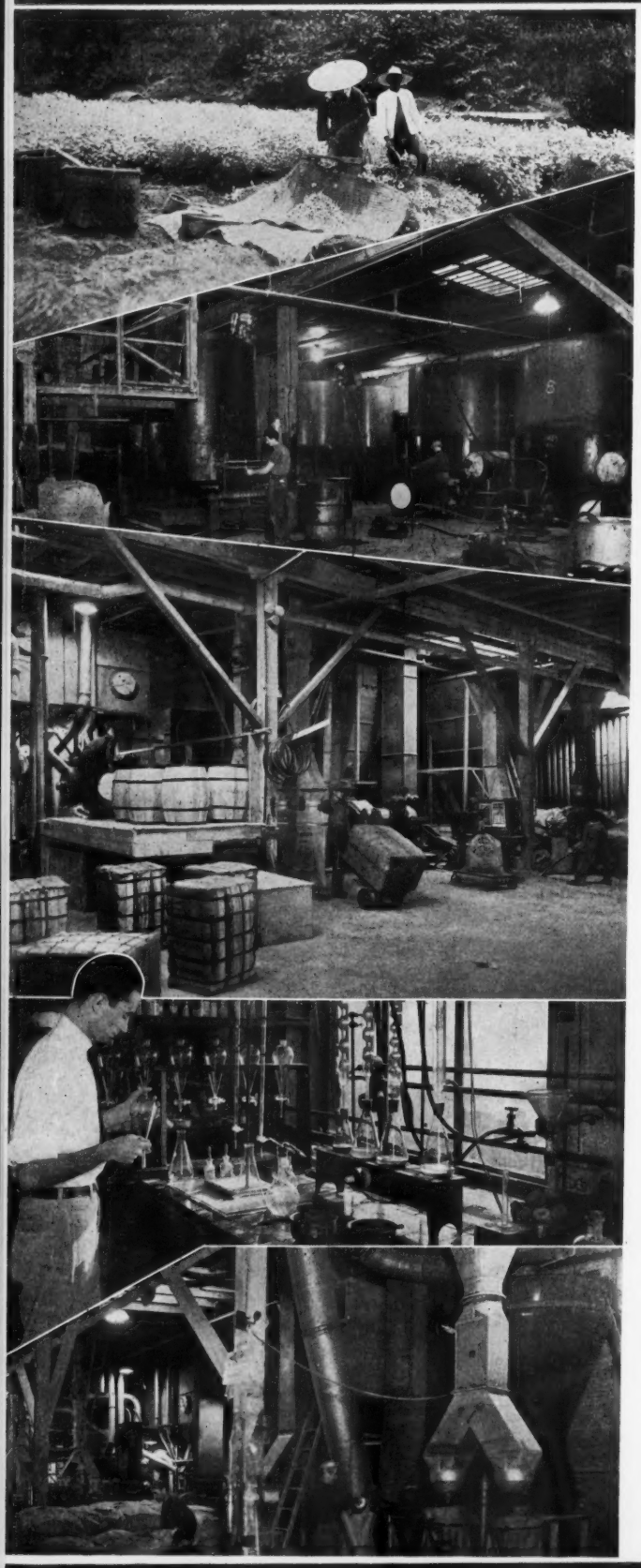

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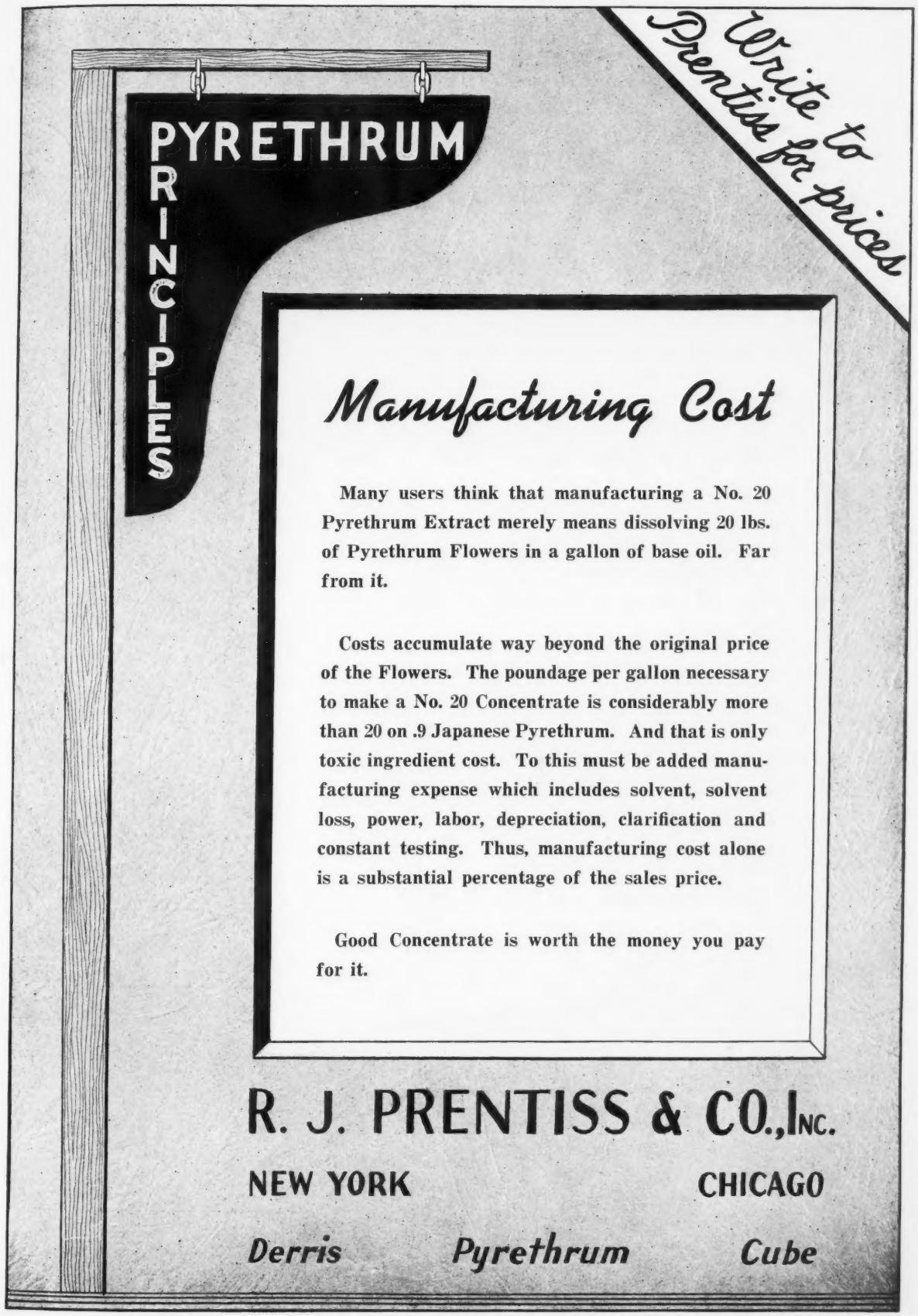
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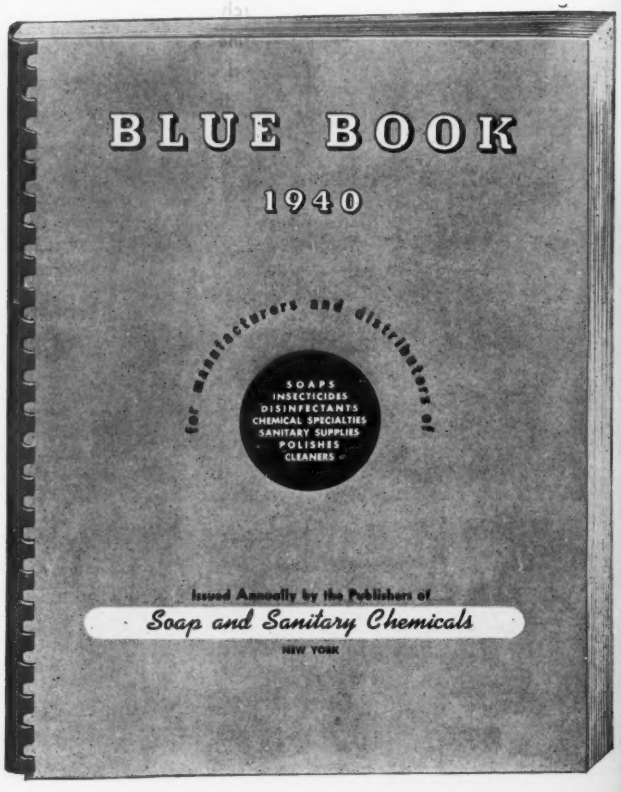

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LILAC (Purple)	WISTERIA (Purple)
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GIVAUDAN-DELAWANNA, INC.

330 WEST 42nd STREET, NEW YORK, N. Y.

DISINFECTANTS-INSECTICIDES-CREOSOTE OILS

How Much Do YOU Know About Disinfectants? Test Your I. Q. on the Following Questions . . .

QUESTIONS

1. The term Disinfectant and the term Germicide are synonymous.	☐ Right	☐ Wrong
2. A Disinfectant is always an Antiseptic.	☐ Right	☐ Wrong
3. The phenol *content* of a Disinfectant is the same as the phenol *coefficient*.	☐ Right	☐ Wrong
4. Cresol Compound U.S.P. is stronger than Cresylic Compound Technical.	☐ Right	☐ Wrong
5. Disinfectants must contain over 5% phenol or else be marked POISON.	☐ Right	☐ Wrong
6. For general disinfection the phenol coefficient is multiplied by 20 to obtain the proper dilution figure.	☐ Right	☐ Wrong
7. A deodorant is a disinfectant.	☐ Right	☐ Wrong
8. Disinfectants should be mixed with hard water for best results.	☐ Right	☐ Wrong
9. In order to meet the specifications set up by the Bureau of Standards a Pine Oil or Coal Tar Disinfectant must contain more than 10% water as inert matter.	☐ Right	☐ Wrong
10. Cresylic Disinfectants must contain at least 25% Tar Acids.	☐ Right	☐ Wrong
11. Soap is not recognized as a disinfectant.	☐ Right	☐ Wrong
12. High Coefficient Disinfectants are more expensive to use than Low Coefficient Disinfectants.	☐ Right	☐ Wrong
13. One Coal Tar Disinfectant is as good as another providing the phenol coefficient is the same.	☐ Right	☐ Wrong
14. A Coal Tar Disinfectant contains coal tar hydro-carbons, acids and soap.	☐ Right	☐ Wrong
15. Coal Tar Disinfectants form solutions in water.	☐ Right	☐ Wrong

See Page 118 for the correct answers. Score 10 points for each correct answer . . . anything over 70 is good . . . over 100 very good . . . and 150, naturally, is perfect.

Baird's TRADE REG. MARK

Where Disinfectants are concerned we know all the answers . . . let us help you with your problems.

Baird's TRADE REG. MARK

BAIRD & McGUIRE, INC.

HOLBROOK, MASS. ST. LOUIS, MO.

Sanitary Products

A Section of SOAP

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

A REQUEST to the Department of Agriculture that the new labeling regulations covering pyrethrum powder insecticides which become effective next September 1 be postponed for a year, has been turned down by the Department. The plea for postponement of the enforcement date and for other changes was made by the National Association of Insecticide & Disinfectant Manufacturers on the grounds that accurate labeling, due to pyrethrum deterioration, would be impossible, and that prompt enforcement of the regulations would cause confusion and hardship, especially among smaller manufacturers. However, officials of the Department are faced with the enforcement of the law, and do not feel that further delay in putting this revision into effect is justified. Therefore, the regulations as they stand become effective September 1.

No alternative remains for those marketing pyrethrum powder products, and likewise pyrethrum liquids of a non-petroleum type, but to comply. Those firms which have waited, hoping for a change or postponement, should immediately take steps to label their products in keeping with the new regulations. This means today, and not next month! It means that any product shipped after September 1, irrespective of when it was packed, is liable to seizure if it does not carry a statement of active or inert ingredients. We feel that the Department will show every consideration to manufacturers who make full effort to comply with the regulations, but we fear that those who postpone compliance because of the uncertainties involved are likely to find themselves in hot water. To those who have not as yet revised their labels, we urge that they act immediately!

IN A recent bidding for liquid insecticide to be supplied to the Veterans Administration, Washington, the bids for 3,300 gallons of insecticide ranged all the way from $1,237 up to $7,427 with approximately thirty bidders. These quotations were submitted under the recently issued new specification of the Veterans Administration. Variation in the prices submitted, even within the wide outside limits noted above, indicates that there is obviously something wrong somewhere. Any specification which brings forth a range of prices from 37 cents up to $2.25 per gallon for a simple standard item such as liquid insecticide, must be faulty. Nothing else could explain the absence of competitive uniformity in prices, because, as is generally known, no manufacturer has an appreciable edge on any other in supplying this particular material. It would seem logical to believe that each bidder had a different idea of the product required. And with all this, the Veterans Administration continues to ignore requests that it adopt the insecticide specification of the National Bureau of Standards in place of its own.

SANITATION IN

THE problem of sanitation and fumigation as it concerns a commercial air line is probably small when compared to the average problem of a fumigant or insecticide manufacturer. It is, however, an important one to the air line operator from a passenger comfort standpoint, and therefore must be seriously studied and controlled. Sanitation and fumigation as practiced by commercial air lines can properly be classified under three definite types of control. 1. Control of odor. 2. Control of the more common pests, such as the fly and mosquito. 3. Control of roaches, beetles and similar insects.

It has been generally agreed that cleanliness is one of the primary factors contributing to proper pest and odor control. Also, from the reaction of the passenger, cleanliness itself in an airplane interior is of vital importance. Because of this two-fold purpose in cleaning, that is, general passenger comfort as well as odor and pest control, air lines are exacting in overhaul and maintenance procedures. The cleaning of the airplane interior is accomplished each time the airplane lays over between trips at a terminal. All soiled, removable equipment is entirely replaced. The windows, cabin lining, chairs, cushions, rugs and curtains are all very thoroughly gone over with a vacuum cleaner. The stewardess' buffet equipment is also carefully cleaned with both the vacuum cleaner and washed down with a siutable solution when necessary. The pilot's cockpit and the wash room are subject to the same cleaning. In order that nothing is missed, the cargo compartments, both front and rear, are also cleaned. This type of cleaning which is accomplished in regular service is done on each airplane on the average of once a day.

All airplanes are routed to the overhaul and repair base at approximately 600 hour intervals. At this time the entire plane is dismantled, all plane parts are inspected and are repaired or replaced when necessary. Newly overhauled engines are installed and it is at this time that the airplane cabin and whole structure, for that matter, receive a *real* cleaning. The entire cabin is stripped of cabin furnishings, and the curtains, chairs, rugs, ash trays, cushions or hassocks, removable buffet equipment, floor boards, and any other items which may be detached or removed are thoroughly cleaned. The rugs are regularly dry cleaned at this overhaul period. The buffet section is entirely cleaned and scoured. When all this is completed, the airplane interior equipment is replaced and the cabin is again ready for service.

Despite this rigid cleaning program, the air line has felt that further consideration must be given to the periodic use of some fumigant or insecticide and deodorant between the regular overhaul operations.

Odor Control. There are three distinct uses for a deodorant when considering the sanitation problem of an airline.

1. It is necessary to deodorize the cabin between trips to eliminate musty or undesirable odors that may be in the plane.

2. A deodorant must be used in toilets and lavatories.

3. It may be necessary to employ a deodorant while in flight.

The study of deodorants showed that from a storage as well as an economical standpoint, the most desirable type was one that could be satisfactorily used in all of the above three mentioned places. "After odor" with respect to a deodorant is definitely undesirable. In several cases it was found that in some of those tested, the "fragrance" of the deodorant was probably a little worse than the odor which was being eliminated.

Perfumed deodorants are not particularly desirable for use by an air line. Because of ease in shipping

* Paper presented at the 26th annual Summer meeting, Natl. Assn. of Insecticide & Disinfectant Mfrs., Lake Wawasee, Ind., June 19, 1940.

IN THE AIR...

By W. W. Davies*

United Air Lines Transport Corp.

and storing, a deodorant should be in the concentrated state. It must be capable of solution in water and shall be used in a spray in this manner. It must be fully effective with respect to alleviating smoke, musty, emesis, lavatory and such odors. In either the dilute or concentrated state, it must be definitely non-corrosive or harmless with respect to aluminum alloy, steel, fabrics, leather or rubber.

In order that it can be carried in a small glass atomizer for use in the cabin during flight, the deodorant in the dilute state must be either non-freezing in temperatures well below 32° F. or capable of being mixed in a 50 per cent solution in butyl alcohol with no decrease in the deodorizing effect. The reason for this is that during the Winter months the airplane is occasionally left outside and unheated and the atomizer containing the deodorant is subject to temperatures well below freezing. One other feature desired in a deodorant is that it be capable of being used for wiping as with a rag as well as for spraying in an enclosed space. This permits for the proper deodorization of metal surfaces.

Control of Flies and Mosquitoes. This problem resolves itself into one of both prevention and cure. No matter how well the airplane may be sprayed and kept sprayed, our experience has shown that the fly and mosquito can seemingly find their way in from the outside. One very disconcerting thing is that their bites seem to increase in intensity with increase in altitude.

In order to differentiate between the types of insecticide used, the stronger liquid for bed bugs and such shall be arbitrarily classed as a major insecticide and the weaker, as used for flies and mosquitoes, shall be referred to as a minor insecticide.

A major insecticide which will be discussed later could be adapted for control of the fly and mosquito on the basis of kill value, but the liquid itself is too costly and the method too unwieldy and for that reason a special minor insecticide for flies and mosquitoes alone is used.

The use of liquid is again employed here because of the efficiency and ease in handling. It must be capable of doing its job quickly inasmuch as it is used while the plane is at the terminal just prior to departure as well as between trips. Ordinarily, time for accomplishing will be limited to about five minutes. Because of this the hand spray is considered the most desirable piece of equipment. In order that a clearer picture may be given of the properties required of an insecticide for fly and mosquito control, general specifications for an insecticide for use on United Air Lines are quoted:

1. An insecticide in liquid form and capable of being used in sprayer is desired.
2. It shall have a high effective "kill" value with respect to flies, mosquitoes and gnats.
3. An insecticide that has no "after odor" is desired.
4. The insecticide shall be definitely non-corrosive and unharmful with respect to aluminum alloy, fabrics, leathers and rubber.
5. It shall be capable of being stored in metal containers.
6. The insecticide shall be non-inflammable.

Control of Roaches, Beetles, Bed Bugs and similar insects. The problem of the control of these pests as pertains to an air line is one of prevention rather than cure. To the best of the writer's knowledge, no actual cases have ever been found with respect to their presence in an airplane. Accordingly then the problem is not one of elimination, but purely one of prevention which has made it somewhat more difficult.

The reason for using a fumigant or insecticide is to eliminate any possibility of insects or pests which might be carried into the airplane either on passengers' or air line personnel's clothes, or in or on baggage. These latter effects might bring into the airplane some vermin or other type of pest which could not be removed satisfactorily without the use of some such product.

Because of the amount of work that must be done on an airplane at time of routine servicing, it is essential that any means of fumigation be accomplished within a half-hour period. It must also be completed at one of the standard inspection periods. The hundred hour check period occurs approximately every two weeks which is most satisfactory for pest control.

In our study of sanitation and fumigation, all of the types of in-

secticides and fumigants which could possibly be used were studied to determine which of these would be the most adaptable for our service. The use of any of the fumigating gases such as hydrocyanic acid gas, methyl bromide and others would require a very definite sealing of the cabin at the time they were used. The equipment and procedure necessary for using a gaseous fumigant was considered to be too complicated. Some of these gases in certain concentrations are also considered to be very explosive as well as having a definite toxic effect on individuals. There is some question as to the possibility of corrosion with respect to several of the types of metals used in airplane structure. These factors together with the difficulty of accomplishing such a procedure in the amount of time available eliminated this method from further consideration.

A recent publication gave a description of the type of fumigation which must be employed by one air line that operates out of the United States. In order to combat the mosquito that carries yellow fever germs, the airplane is closed up, as soon as it has deposited its cargo, and fumigated with potassium cyanide gas. It is also very thoroughly inspected for mosquitoes. However, such a procedure is not necessary for domestic air line operation.

The use of a powder, of which there are many sundry varieties available, for the control of bed bugs, roaches and other such common pests, is undesirable. It is very messy to handle. Its effect as compared to a gaseous or liquid pest eliminator is questionable and requires considerably more attention with respect to service. The latter is mostly due to the fact that after the powder has been used it must be swept up or brushed out. This is very difficult to do on rugs and seat upholstery. It also must be left on the equipment being treated for some length of time, to have any effect, which is objectionable. The use of a liquid major insecticide which could be easily sprayed in the cabin was deemed to be the most satisfactory.

It is desirable to obtain a material that will fill the cabin or fog it as rapidly as possible. It should not be so volatile that it will not settle and penetrate rapidly into crevices and upholstering. A heavy oil base is undesirable inasmuch as this leaves a deposit on metal surfaces which must be wiped off at the end of the "disinfestation" period.

In order to facilitate the use of this major insecticide in a short time as well as to permit personnel to go through the cabin for service work, it is necessary that the liquid have no toxic effect with respect to the individual.

Most liquid insecticides being of an oil base, there is a possibility of a combustible mixture being developed in the cabin at the time of vaporization. For this reason the flash point (open cup method) of the liquid used should be 200° F. or above. It may be interesting to note in this case that if an airplane is left outside on a hot summer day with the sun's rays upon it, the cabin temperature itself can rise to as high as 130° F.

One other factor that is definitely desirable in an insecticide is the rapid dispersing of the fog in the cabin after the disinfestation period with only the cabin doors and exhaust vents open. It is impractical to use an auxiliary means of ventilation for clearing the cabin. After the cabin is properly cleared of the fog created, there must be no after odor. Time does not permit for the use of a deodorant or deodorizer.

Further consideration must be given to the liquid used in that it must have no deleterious effect on upholstery or fabric of any kind and must be definitely non-corrosive with respect to metals, either aluminum, aluminum alloy or steel.

In this study of "disinfesting" of an airplane and the choosing of the type of major insecticide desired, serious consideration had also to be given to the type of dispensing unit used. Four general types were considered in the original investigation, namely, the hand spray, the centrifugal diffuser, the steam vaporizater and the electric sprayer using compressed air.

It was found that the hand spray required an extensive amount of work on the part of the personnel, and was inefficient because it did not properly break up the liquid into a fine spray. It was also necessary that the individual operating the equipment remain constantly with the sprayer unit, taking his time away from other duties.

The other types of dispensing units as mentioned above appeared to work satisfactorily with certain specified liquid major insecticides. However, consideration must be given to the complication of such a unit and how this may affect operation and maintenance. Quite naturally the simplest equipment both from consideration of design as well as operation is the most desirable.

The title of this paper, perhaps, is too general a term under which to class those subjects just discussed. Also, some new words and phrases may have been coined, due to the author's limited knowledge as to the correct terms to use. However, with all these discrepancies it is hoped that this discussion has given a general idea as to the problems encountered by an airline in the matter of sanitation and insect control.

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Mosquito Repellent

A mixture of oil of thyme 0.5, concentrated extract of pyrethrum in mineral oil 1, and castor oil 2-3 fluid ounces, gave protection against mosquitoes for 3-5 hours. Extract of pyrethrum incorporated in ointments composed of various combinations of paraffin, lanolin, tallow and beeswax was an effective repellent, but the ointments were not so satisfactory as liquid preparations containing pyrethrum and they were somewhat oppressive and irritating to the skin. Promising results were obtained with a mixture of coconut oil 6, pennyroyal oil 1, oil of lavender 1 and spirits of camphor 0.5 part. Arthur Gibson. New Jersey Mosquito Extermination Assoc., Proc. Ann. Meeting **26,** 109-16; through Chem. Abs.

HOME-MADE STOCK SPRAYS...

Studies of pyrethrin content of home-extracted sprays indicate such are not economical

Dr. Craig Eagleson

Bur. Ent. & Plant Quarantine, U. S. D. A.

A WIDE divergence of opinion exists among entomologists concerning the efficacy and economy of home-made pyrethrum livestock sprays. Directions for making them have for years been circulated by State experiment stations and the Federal Bureau of Entomology and Plant Quarantine. On the other hand, those interested in the sale of finished insecticides, and others, have stated that home-made sprays were unsatisfactory and that recommendations for their preparation should be withdrawn[1]. Evidently there is need for more information on the subject.

This subject was studied by Gertler and Haller[2], using chemical methods of assay. After preparing kerosene extracts of seven samples of pyrethrum at a concentration of 60 grams per 500 cc. (approximately 1 pound per gallon) steeped for 48 hours, they reported that approximately 94 per cent of the pyrethrins originally present in the pyrethrum powder was dissolved in the kerosene employed. They also reported an average loss of 27 per cent of the steepate through inability to recover it from the sludge. Thus, 68.6 per cent gross efficiency in extracting was obtained.

Bioassays of home-made livestock sprays have been conducted at the Dallas, Tex., laboratory of the Bureau of Entomology and Plant Quarantine to determine their efficiency when used under simulated field conditions. The equipment used and the dosing technic were described in a paper published in the preceding issue.

Various home-made sprays were prepared by steeping pyrethrum in water-white kerosene, and their toxicity to houseflies was compared with a standard spray prepared from a commercial concentrate. Chemical analyses of both flowers and concentrate were obtained to provide a basis for evaluation.

Preparation of Sprays

All test sprays were made from one sample of pyrethrum flowers taken from a bale of whole dried flower heads purchased from an importer and stored in a dry room. The flowers were thoroughly mixed before sampling. One portion of the sample was used as it came from the bale, another portion was coarsely ground into a state resembling, and hereafter called, chaff, and a third portion was ground to a fine powder. The chaff was made by forcing the flowers through a common food chopper. Part of it was then ground in a steel-ball mill for 6 hours to obtain the fine powder. The particle-size distribution of the two ground portions was as follows:

Standard sieve No.	*Per cent by weight retained*
Chaff	
10	15.0
20	26.8
30	24.3
40	15.1
70	11.8
<70	7.0
Powder	
200	26.5
325	17.4
<325	52.4

A commercial pure-pyrethrum 20-to-1 concentrate was used to make a control solution.

The kerosene used both for steeping the flowers and for diluting the commercial concentrate was a water-white Texas product, the physical properties of which, as determined in this laboratory, were as follows:

DISTILLATION DATA

Deg. C.	*Per cent distilled*
170	Initial boiling point
170-210	8.8
210-230	48.8
230-250	36.6
Residue	5.8

Specific gravity 30°/30° C., 0.8063; coefficient of viscosity at 30° C., 0.0157; unsulfonatable residue, 98 per cent; sodium plumbite test for sulfur, negative.

The home-made sprays were made by steeping 20 grams of pyrethrum in 166.7 cc. (approximately 1 pound per gallon) of kerosene contained in a 500-cc. flint-glass jar with tight lid.

Several procedures were tried to discover the most efficient method of steeping. To determine the optimum duration of the steeping, one series of steepates was prepared by soaking the pyrethrum for varying periods,—1, 2, 24, 48, and 72 hours for the chaff and powder, and for the last three periods for the whole flowers. Another sample of flowers was soaked for 24 hours in one-half aliquot of solvent, filtered, the marc soaked 24 hours in the remaining half of the solvent, and the two steepates combined. A final steepate

was prepared from the powdered pyrethrum by soaking 24 hours in 100 cc. of kerosene and rinsing the marc with the remainder (66.7 cc.) in three portions. All steeping was done at 30 ± 1° C. The steepates were decanted from the sludge and filtered through a coarse paper. On an average 79 per cent of the steepate was recovered from the chaff and fine powder. The percentage recovery for each steepate is shown in table 2. The pure-pyrethrum concentrate was diluted with kerosene to 10.0-millimolar concentration and subsequently diluted to the desired strength just before spraying.

Use Millimolar Concentration

It is customary to state the strength of fly sprays in terms of total pyrethrins per unit volume or weight, irrespective of the difference in toxic action of pyrethrins I and II. It was found more convenient in this work to go a step further and use millimolar solutions of pyrethrins made on the basis of the equivalent mean molecular weight of pyrethrins I and II.

$$\text{M.W.} = \frac{330.2\ (\text{pyr. I})\ (a) + 374.2\ (\text{pyr. II})\ (b)}{(\text{pyr. I} + \text{pyr. II})}$$

where M.W. is the equivalent mean molecular weight for a specified sample; Pyr. I and Pyr. II are milligrams of pyrethrins I and II, respectively, per 100 cc. (or else percentages by weight); and a and b are the factors for their respective relative toxicities to the insect under consideration.

By this means the conception of molecular weight and millimolar solutions is extended somewhat to allow their application to a combination of poisons which are invariably associated and which for practical purposes are inseparable. Although a new mean molecular weight must be calculated for each sample of raw material in which the proportion of pyrethrins differs, the final standard solutions will show equivalent effects on the particular insect species. Standard solutions of pyrethrins can in this way be compared as to toxicity with standard solutions of other insecticides having unimolecular composition. Milligrams per 100 cc. is converted to millimolar concentration by dividing by M.W./10.

As yet there are no data from which factors for the relative toxicities of the two pyrethrins to houseflies can be reliably determined. In this work it was assumed that they were of equal toxicity. Therefore the factors a and b were assigned the value of 1.0.

The Division of Insecticide Investigations of this Bureau cooperated by making chemical analyses (by the Seil method) of the pyrethrin content of the powders and of the experimental standard. Their report is incorporated in table 1.

Method of Making Bioassays

The bioassays were conducted in an aerated spray tunnel and ventilated recovery cabinet. The test insects, *Musca domestica* L., were treated with hypnotic doses of the standard and home-made sprays. The observed effect was stated in terms of mean adjusted percentage torpor for a 2-hour observation period. The biological and biometrical methods used are described in the preceding paper noted before.

The hypnotic dose required such a small amount of fluid that it was necessary to dilute the home-made steepates to one-third their strength with the solvent used in their preparation, rather than to diminish the amount of liquid below 1 cc. The standard was correspondingly diluted to 1.0-millimolar concentration of pyrethrins. The results in table 2 have been corrected for this dilution, so that the figures read on the basis of full-strength steepates.

A series of experiments was conducted to establish the dosage-torpor curve for pyrethrins applied under this set of conditions. It was used as the basis for determining the strength of the home-made sprays in terms of effective pyrethrin content. The equation for the curve is

$$Y = 4.8432 + 2.0319\ (X + 0.01743)$$

where Y = mean torpor in probits
X = logarithm of concentration in millimoles per liter.

Results

The data from the toxicity determinations of home-made extracts are given in table 2. The percentage of adjusted mean torpor, expressed as a probit, was substituted in the regression equation, the logarithm of the resulting values converted to its antilogarithm, and that multiplied by three to correct for dilution of the test material.

The extract of maximum potency obtainable from the powders, as indicated by Soxhlet extraction and chemical analysis, had a pyrethrin concentration of 3.628 millimoles per liter. The efficiency of extraction is expressed as percentage of the calculated molarity with respect to this potential strength. Since two distinct losses of toxicant are evident, one from inefficiency in extraction and the other from failure to recover all the solution from the residue, the efficiency of making a spray was calculated by multiplying the group mean for percentage recovery of steepate by the percentage efficiency of the steepate tested biologically.

The table also includes the cost of materials for making a spray, by each method of steeping, equivalent in toxicity to a satisfactory commercial product. It was assumed that such a livestock spray should possess toxicity equal to a 3.0-millimolar solution of pyrethrins (106 mg./100 cc.). The average total pyrethrin content of large quantities of Japanese flowers imported from 1929 to 1935

Table 1.—Pyrethrin content (Seil method) of the pyrethrum powders and the diluted experimental standard.

Sample	*Percentage of pyrethrins*			*Mean molecular weight of Pyrethrins I and II*	*Millimoles per gram total Pyrethrins*
	I	*II*	*Total*		
Chaff	0.39	0.60	0.99	357	0.0277
Powder	0.37	0.61	0.99	358	0.0277
Experimental standard (corrected for dilution)	0.0249	0.0293	0.0542	352	———

was 0.97 per cent by weight, according to analyses by Gnadinger and Corl[3]. This figure is perhaps too high, for during the past two years the Insecticide Division found them much lower. On November 20, 1939, the price of pyrethrum flowers was 37 cents per pound, and the tank-wagon price of water-white kerosene was 7 cents per gallon.

Under proper conditions pyrethrins can be removed from coarsely ground pyrethrum flowers about as efficiently by steeping them in kerosene as by extracting with petroleum ether in a Soxhlet apparatus. There is little difference between the solutions steeped 24, 48, and 72 hours.

Of the steepates prepared from the chaff, the one prepared by soaking successively in two half-aliquots of kerosene seems the most toxic, but the difference between it and some others is not significantly great.

It was thought likely that the superiority of the steepings made with half-aliquots of solvent was due at least partly to the rinsing effect of changing the solvent. Otherwise the simple 48-hour steepates should have been equal in strength. But no improvement in efficiency of extraction was observed when the marc was washed with fresh solvent and the wash liquor added to the steepate. Tests were made with the extracts obtained by remacerating the marcs from 24-hour steepings of chaff and powder. The fractions of original steepates that could not be removed from the marcs, when diluted with 83.4 cc. of fresh kerosene, should have contained 1.02 and 1.06 millimoles per liter. Actually, by bioassay, their millimolarity was 1.33 and 1.66. The small amount of pyrethrins extracted by the second steeping proved statistically insignificant, and the process was therefore profitless.

The steepates from the fine powder were less toxic than those from the chaff. This is worthy of emphasis, as fine pyrethrum powder is the *only product available* for home manufacture of sprays. The steepate prepared by soaking powder successively in half-aliquots is significantly more toxic than any other prepared from powder. Otherwise there is no difference among the members of this group. It is particularly interesting to note that the solutions prepared from 1- and 2-hour steepings of powder are as toxic as those steeped 3 days.

A comparison of the cost of pyrethrum sprays based on November 1939 markets at Dallas, Tex., is made for the sake of those who may care to make recommendations about the home manufacture of livestock sprays.

	Cents per Gallon
Commercial 20-to-1 pyrethrum concentrate of 60-millimolar strength (2.64 per cent) diluted to 3.0 millimoles per liter with water-white kerosene	42
Home-made livestock spray (most efficient method)	45
Proprietary livestock spray (5-gallon lots)	85

It does not seem likely that the price ratio between the powdered pyrethrum flowers and the commercially extracted concentrate will change markedly. So long as this ratio is maintained, it is cheaper for the stockman to dilute a reputable commercial pyrethrum concentrate with kerosene than to steep the flowers. Other factors, such as instability and variability of pyrethrin content of the powder, in contrast to the uniform content and relative stability of commercial concentrate, as well as the labor and likelihood of waste in home steeping, point to the same conclusion,—that the use of commercial pyrethrum concentrates is more advantageous.

(*Turn to Page* 107)

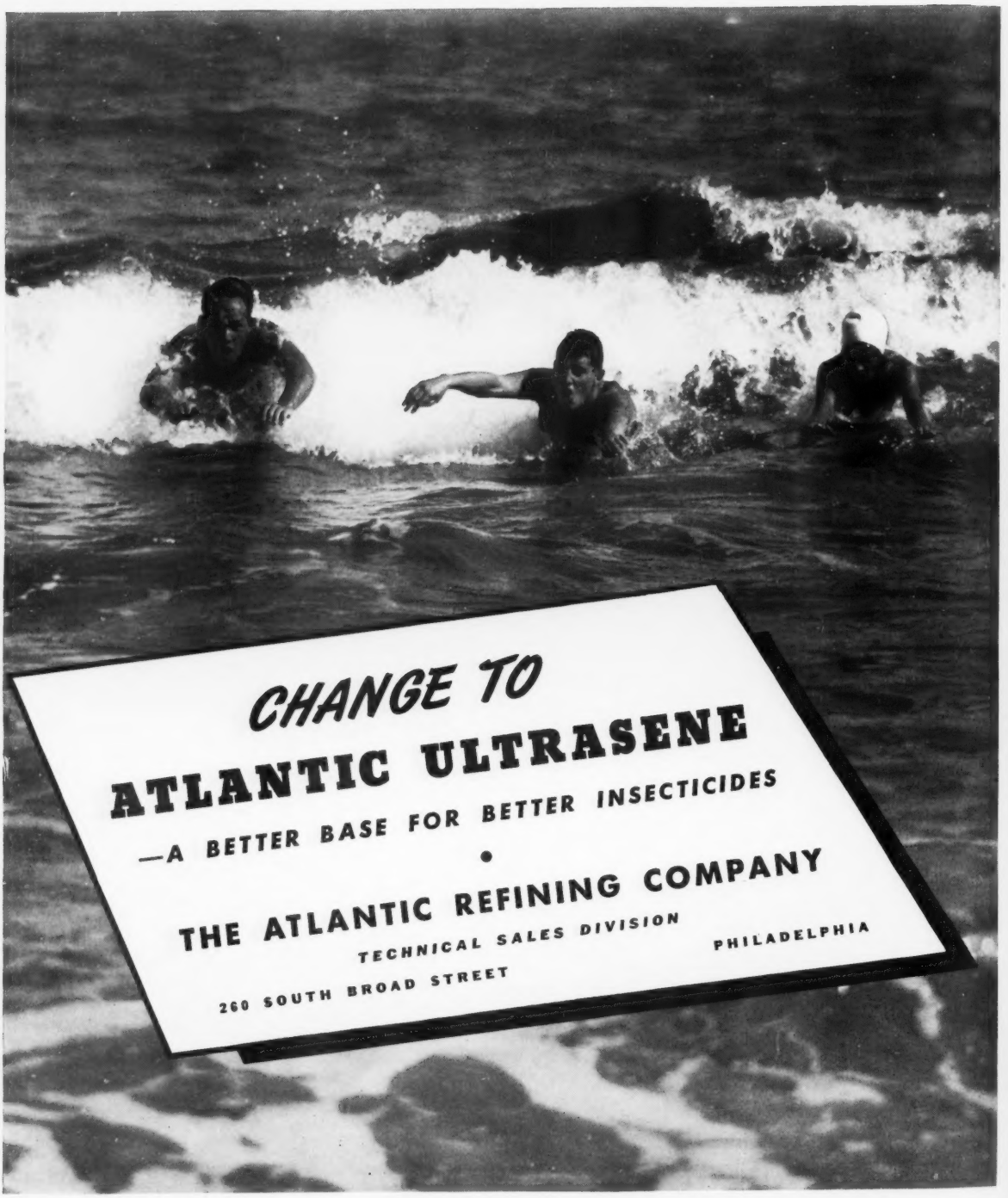
Table 2.—Bioassays of home-made livestock sprays

Duration of steep hours	*Recovery of solution per cent*	*Number of replications*	*Mean adjusted torpor per cent ± sx*	*Concentration millimoles per liter*	*Efficiency of extraction per cent*	*Efficiency of making spray per cent*	*Cost per gallon cents*
Chaff							
1	...	12	42.5 ± 2.4	2.78	77	59	64
2	...	12	42.5 ± 1.2	2.78	77	59	64
24	75.0	18	48.0 ± 1.9	3.25	90	69	56
48	78.6	12	53.5 ± 2.4	3.80	105	80	49
72	78.6	12	54.0 ± 2.3	3.86	106	81	48
*48	74.2	12	56.0 ± 2.4	4.08	113	86	45
Mean	76.6 ± 1.1						
Fine powder							
1	...	12	47.5 ± 1.3	3.21	88	71	54
2	...	12	46.0 ± 1.4	3.07	85	69	56
24	78.6	30	48.4 ± 1.3	3.29	91	74	52
48	82.7	12	46.5 ± 2.7	3.12	86	70	55
72	82.3	12	44.5 ± 2.8	2.94	81	66	58
*48	81.4	18	55.0 ± 1.9	3.97	109	88	45
Mean	81.2 ± 1.1						
Whole flowers							
24	88.2	11	36.5 ± 2.8	2.33	64	57	66
43	90.0	17	40.3 ± 1.5	2.61	72	64	58
72	89.5	12	37.0 ± 3.0	2.36	65	58	65
*48	90.0	11	44.0 ± 2.3	2.90	80	72	54
Mean	89.4 ± 0.4						
Fine powder†							
24	...	6	44.0 ± 1.5	2.90	80	65	59

*20 grams of powder steeped 24 hours in one-half aliquot of kerosene, filtered, and the marc steeped 24 hours in remainder; steepates combined.

†20 grams of powder steeped 24 hours in 100 cc. of kerosene, filtered, and marc washed with three portions of the remaining aliquot of solvent. Steepate and wash liquor combined.

GET IN THE SWIM



EXPORTING INSECTICIDES . . .

How the Department of Commerce and its branch offices are designed to aid and protect exporters

*By George C. Payne**

District Manager, Chicago, U. S. Dept. Commerce

IN THESE days of war-time interference with the normal flow of international trade, it is particularly stimulating to find an industry which is enjoying a large volume of foreign business in spite of the current trade conditions. I find, on the basis of our monthly summary of foreign commerce of the United States, that your industry is well up in the million dollar class in its export and import activities.

Combining the various items which your group produces, including the arsenates; petroleum oil sprays; the agricultural, household and industrial insecticides and exterminators in their various forms; as well as the household and industrial disinfectants and related preparations, we find that the United States exports for the calendar year 1939 amounted to just short of $5,000,000 ($4,973,000). For the first four months of 1940 the total exports of your products amounted to a little over $2,000,000 ($2,002,000).

I was curious to see how the war situation had affected your foreign trade. For the period commencing September 1939, when the war started, and ending April 1940, the exports of the above mentioned items amounted to about $3,800,000. Far from the war having an adverse effect on your international trade, I find that for the eight-month war period just referred to, the U. S. exports of your products were over a million dollars more than during the corresponding eight months of 1938-39. A substantial part of your exports have been going to western hemisphere customers.

Imports too play an important part in the manufacture of some of your preparations. One of the essential ingredients is, of course, pyrethrum, the 1939 U. S. imports of which were valued at $3,173,000. During the first three months of the present year, pyrethrum imports amounted to $857,000.

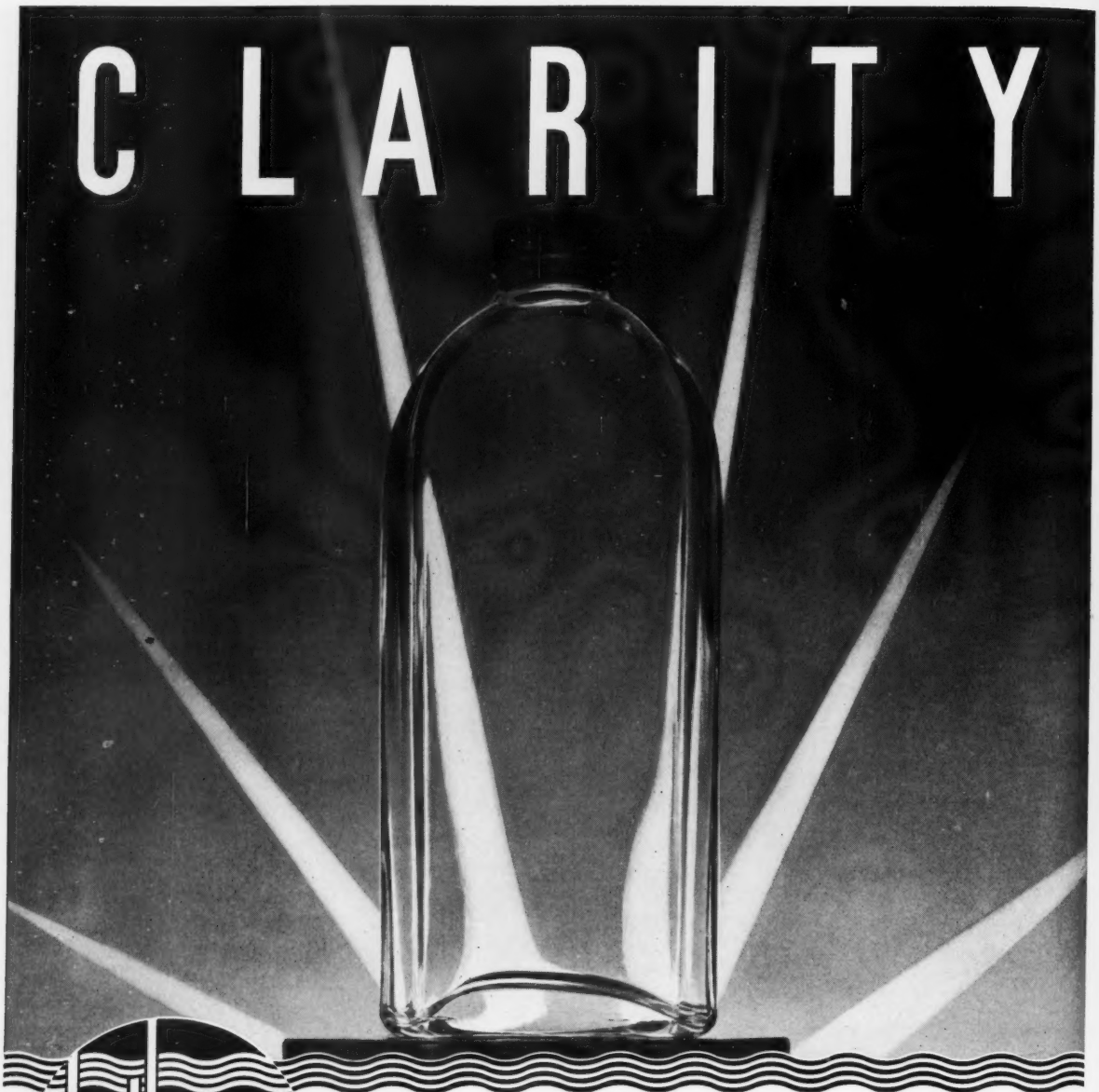
Your chairman asked me to discuss some of the facilities of the Bureau of Foreign and Domestic Commerce available to organizations engaged in foreign trade. I shall begin by mentioning some of the direct assistance designed for the chemical industry, of which yours is a part, and I shall lead from this to a broader analysis of the Bureau's operations and functions.

The needs of each one of the various industries which combine to make up what we call our economy, are specialized needs. In order to adapt the information supplied by the other Bureau divisions to the requirements of these separate industries, the Bureau maintains a group of industrial divisions. It is their job not only to analyze and interpret data which come to them from the Foreign Service but also to promote the trade in their particular products. The various commodities produced by American industry are divided among this group of divisions, of which the Chemical Division is your clearing house for mobilizing the resources of the Bureau to help you or to assist you in establishing contacts with other Government agencies.

A fundamental factor in appraising foreign markets is reliable and adequate statistical information. Our Bureau has compiled appropriate classifications from which your industry can determine at a glance the movement by countries of destination of the principal items sold by your group. A number of the specific classifications have already been named. In order to give an individualized service to industries requiring statistical details earlier than they would otherwise be available we have various special statistical releases on a monthly basis showing total U. S. exports by countries of destination. Such a statement is available particularly for the insecticide industry. It covers exports of agricultural, industrial and household insecticides including disinfectants, and the twelve monthly issues may be had for a subscription cost of $1.00.

Another important fundamental in developing foreign markets is to know what houses are most likely to be interested in a particular product. It is also essential, of course, to be able to ascertain whether these prospects are sound business people, whether they may be already handling

*Address before 26th annual Summer meeting, Natl. Assn. of Insecticide & Disinfectant Mfrs., Lake Wawasee, Ind., June 19, 1940.



Lethane 384 Special

LETHANE sprays are clear and remain clear; they will always impress the consumer with their non-staining character.

RÖHM & HAAS COMPANY, INC.

222 West Washington Square, Philadelphia, Pa.

CHICAGO • KANSAS CITY, MO. • OAKLAND, CALIF. • *Canadian Agent*—P. N. SODEN & CO., LTD., MONTREAL

a competing line, and whether they have the size and type of organization required to do a thorough marketing job. Our Bureau meets your needs in these respects by supplying trade lists showing importers and dealers handling chemicals, including insecticides. The reliability and adequacy of the concerns included in these lists can be learned through our world trade directory reports which, like the trade lists, are available at $1.00 each.

As of more general interest to your group, I might mention our World Trade Notes on Chemicals and Allied Products. These are issued weekly and frequently contain items of special importance to the insecticide trade. The subscription rate is $1.00 per year. Another Bureau publication of outstanding usefulness in the chemical trade, is our annual volume on world chemical developments. The latest, Trade Promotion Series No. 195, covers the world chemical situation for 1938 and in respect to many countries, comment is made regarding insecticides, the degree of local use and manufacture, and extent of dependence on outside markets.

Articles containing poisonous substances are frequently subject to detailed regulations in foreign countries. These may apply in a number of ways, including special certifications, labels, etc. The insecticide exporter may obtain from our Foreign Tariffs Division complete information concerning such regulations and, of course, we can always supply on request rates of duty on your products when imported into foreign countries.

Obviously, one of the most important elements in any commercial transaction is to obtain payment in accordance with the terms of the sale. Ordinarily it may be felt that so long as the customers' financial stability is sound, there is little to worry about in respect to proper settlement, yet in these days of varied and intricate foreign finance and exchange controls, there are many pitfalls to be avoided. Our Finance Division comes to your aid on such questions by informing you of the availability of foreign exchange to pay for your goods, the rates of exchange for blocked currencies, and methods of liquidating frozen accounts. Business men desiring to keep in close touch with financial developments in overseas markets find it profitable to receive regularly one or all of our three series of financial notes, European, Far Eastern and Latin American.

Closely relating to the many rules and regulations pertaining to finance may be mentioned the multitude of commercial laws in effect in countries across our borders. Even our own laws are sometimes thought to be confusing, but the average exporter finds foreign laws much more complex. To protect his interests, he should be liberally posted on the effect of these laws on his foreign business. Here again he may obtain our help through our Division of Commercial laws. It is the desire of this division to keep business informed on all foreign laws of interest to Americans trading in a foreign country. This branch of our service can also be of usefulness in helping to settle trade disputes between United States business men and their foreign customers.

It is part of the work of the Division of Commercial Laws to furnish information on the effect of certain United States laws on international commerce. Since the passage of the Neutrality Act, this division has been under high pressure due to many requests for interpretations of the Act regarding transfer of title, extension of credit, and the various oaths and declarations required on exports. It has been the Division's job to help exporters readjust their trade practices to conform with the Act.

MANY other details of Bureau services could be highlighted if time permitted but while on the subject of laws and regulations, it may be appropriate to refer to four standards for disinfectants and the one for insecticides sponsored by your association and established by the National Bureau of Standards.

Recently, through cooperative activity of the National Bureau of Standards and the Bureau of Foreign and Domestic Commerce, the work on establishment of commercial standards has been extended to include standards for export trade. The purpose of such standards is to guarantee quality or performance; to extend the benefits of increased consumer confidence; better understanding between producers, distributors, and users of exported commodities; and to build export trade on a firm and lasting basis of quality and confidence in American-made products.

Export standards will be published in all necessary languages and placed in the hands of foreign trade representatives, commercial attaches, and others in a postiion to promote the sale of American-made products which are regularly certified as conforming to the export standards.

The procedure for the establishment of export standards follows closely the procedure for domestic standards, but includes in addition, consideration of any special demands peculiar to the countries in which a market is believed to exist. The National Bureau of Standards and the Bureau of Foreign and Domestic Commerce will cooperate with your Association in establishing export standards for your products if you desire.

I have referred at some length to the work of our Bureau in developing, analyzing and disseminating information to aid business men. It is only logical that you would wish to know how we secure our facts abroad. This is accomplished through our close working arrangement with the United States Department of State, whereby its specialists gather in foreign countries a wide variety of commercial, economic and industrial information of value to the American foreign trader in determining the availability of or absence of a market for his particular product. These reports are rushed, by cablegram where necessary, to our trade experts in the Bureau at Washington. There the reports are carefully analyzed and studied and likewise dispatched without delay to the district offices of the Bureau by radio, telegraph or air

(*Turn to Page* 103)

D&O
ESTABLISHED IN 1798

PROTESSENOL

C. S. (cattle spray) CONCENTRATE

FOR

LIVESTOCK SPRAYS

$1.50 gallon in 55-gallon drums

* * * *

PROTESSENOL C. S. Concentrate unites in the correct proportions for maximum results, highly toxic Derris extractives and an effectively repellent type of Essenol.

Livestock sprays made with PROTESSENOL and a small proportion of an effective knockdown agent have an adequate knockdown, an exceptionally high twenty-four-hour kill, plus substantial moribund kill and give effective and enduring protection to the animals. PROTESSENOL sprays repel flies both by vapor repellency and by the contact irritation and leg paralysis provided by Derris extractives.

PROTESSENOL livestock sprays combine a Grade-AA kill and genuinely effective repellency with low manufacturing cost.

DODGE & OLCOTT COMPANY

180 Varick Street . . . . New York, N. Y.

BOSTON : CHICAGO : PHILADELPHIA ST. LOUIS : LOS ANGELES

Plant and Laboratories . . . Bayonne, N. J.

Disinfectant Specifications...

Proposed revision of commercial specifications for phenolic disinfectants adopted by N.A.I.D.M.

REVISIONS of commercial standard specifications for phenolic disinfectants (CS-70-38 and CS71-38) recommended by a special committee headed by Dr. E. G. Klarmann of Lehn & Fink, Inc. were officially adopted by the National Association of Insecticide & Disinfectant Manufacturers at its recent meeting at Lake Wawasee, Ind. (June 19, 1940). The specifications as revised have been submitted to the National Bureau of Standards for consideration by manufacturers, buyers and large users of phenolic disinfectants with a view to general approval. If and when the revisions are generally approved in the industry, the new specifications will be promulgated by the Bureau of Standards as official commercial standards to replace those (CS70-38 and CS71-38) now in effect. The new proposed standards were recommended to the N.A.I.D.M. by the special committee after a year's study and discussion of the revisions. The new specifications follow:

RECOMMENDED REVISION OF COMMERCIAL STANDARD SPECIFICATION CS70-38 PHENOLIC DISINFECTANT (Emulsifying Type) COMMERCIAL STANDARD CS70-XX

Purpose

1. The purpose of this commercial standard is to provide a minimum specification for quality, as a basis for understanding and voluntary guarantees between producers, distributors, and users in the purchase of the commodities covered by these specifications, and as a foundation for confidence on the part of purchasers that the efficacy of the material is that which may be expected of phenolic disinfectant (emulsifying type), manufactured in conformity with a nationally recognized specification.

Scope

2. This standard covers materials, physical and chemical properties, and certification of quality of phenolic disinfectant (emulsifying type).

General Requirements

3. It shall be made from phenols of coal tar or petroleum origin, or combinations of such phenols with coal tar oils, and an emulsifying agent.

4. It shall contain not less than 65 per cent by weight of phenols and coal tar oils.

5. It shall contain not over 10 per cent of water, by weight.

6. It shall not contain kerosene or any petroleum distillates other than phenols of petroleum origin.

7. The phenol coefficient shall be determined by the Food and Drug Administration Method using B. typhosus as test organism, and shall be clearly stated on the label attached to each shipping container[1].

8. It shall make milky emulsions with water of zero hardness at 20° C. (68° F.) when diluted in the ratio of 5 parts of disinfectant to 95 parts of water for disinfectants having phenol coefficients of 10 or under; and in the ratio of 2 parts of disinfectant to 98 parts of water for disinfectants having phenol coefficients of over 10. These emulsions shall show not more than a trace of oily float or sediment when stored for 5 hours at room temperature.

9. It shall remain limpid, showing no sign of naphthalene crystallization down to 0° C. in 3 hours.

10. It shall contain less than 5 per cent of benzophenol.

11. The disinfectant, under normal and reasonable conditions of storage, shall remain stable and show no loss of germicidal value.

Certification and Labeling

12. The following form of statement on labels[2], invoices, etc. is recommended:

"The ..... Company certifies this phenolic disinfectant (emulsifying type) to conform to all requirements of the Standard adopted by the NATIONAL ASSOCIATION OF INSECTICIDE AND DISINFECTANT MANUFACTURERS, INC., and recorded as Commercial Standard CS70 by the National Bureau of Standards of the U. S. Department of Commerce.
Phenol coefficient ....."

RECOMMENDED REVISION OF COMMERCIAL STANDARD SPECIFICATION CS71-38 PHENOLIC DISINFECTANT (Soluble Type) COMMERCIAL STANDARD CS71-XX

Purpose

1. The purpose of this commercial standard is to provide a minimum specification for quality, as a basis for understanding and voluntary guaranties between producers, distributors, and users in the purchase of the commodity covered by these specifications, and as a foundation for confidence on the part of purchasers that the efficacy of the material is that which may be expected of phenolic disinfectant (soluble type), manufactured in conformity with a nationally recognized specification.

Scope

2. This standard covers materials, physical and chemical properties, and certification of quality of phenolic disinfectant (soluble type).

GROUP I.—CRESYLIC DISINFECTANT (PHENOL COEFFICIENTS 1.5 to 5)

General Requirements

3. The product shall be made from cresol or cresylic acid of coal tar or petroleum origin, and an emulsifying agent.

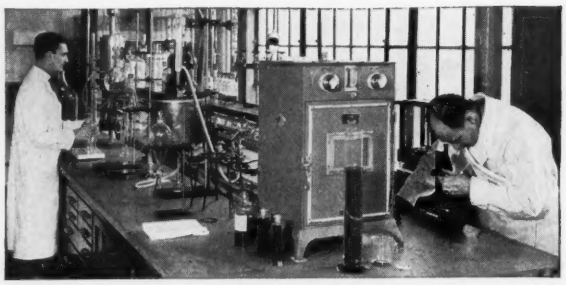
4. It shall contain not less than 50 per cent of cresol or cresylic acid, as determined by the method prescribed in U. S. Pharmacopoeia XI for the assay of cresol in the Saponated Solution of Cresol.

5. It shall contain not more than 25 per cent by weight of inert

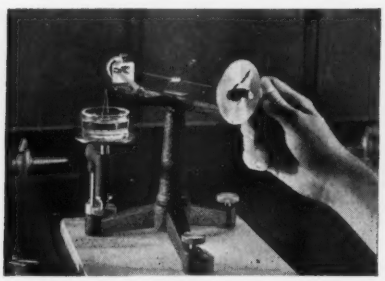
Custom Bred Cockroaches!

They help portray McCormick's Methods which assure you of Finer Pyrethrum and Derris Insecticides

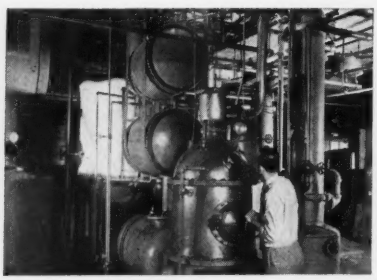
Cockroach Palace! Indicative of McCormick thoroughness are the actual tests on *live* insects to prove, practically, the consistently high killing power of McCormick insecticides. Illustrated is the specially-constructed, escape-proof vault in which roaches are raised for such tests.



Tests—Analytical section of the great McCormick laboratories where, among other daily tests of insecticides, chemical assay of pyrethrum flowers is made by the Gnadinger and Corl and H. A. Siel methods.



Exactitude—Nothing is left undone to insure the utmost effectiveness of McCormick insecticides. Shown here is the Tensiometer—a delicately balanced and adjusted instrument—used for determining the precise surface tension or covering factor of insecticide sprays.



Pyrethrum Extractor—Like a giant coffee maker, this extractor percolates ground pyrethrum flowers in a solvent, after which the solvent is removed under vacuum, leaving a powerful liquid pyrethrum extract used in producing insecticidal sprays.

Unique in laboratory equipment is this Campbell Turntable which facilitates the making of comparative insect-killing tests of several liquid insecticides at one time.

From Flower to Flour—Bales of Pyrethrum flowers from Japan, stored in the McCormick warehouse. Later, they are ground to a microscopic fineness, resulting in a vastly higher number of killing particles to the ounce. This permits closer adhesion to the vital parts of insects and insures a quicker, surer kill.

Bug's-Eye View of the great McCormick Building in Baltimore. Within this structure's 12½ acres of floor space is the most modern equipment for the manufacture and testing of insecticides. Nowhere in the world will you find Pyrethrum and Derris powders which are ground finer than those produced by McCormick.

McCormick

Pyrethrum Powder **Derris Powder**

Derris Extract **Derris Resinate**

Rotenone Crystals

Bee Brand Disinfectant

For further information address: The McCormick Sales Co., Baltimore, Md. In Canada address: McCormick & Co. (Canada), Ltd., 454 King St., West, Toronto, Canada.

ingredients (water plus glycerine, and organic solvents, if any).

6. The phenol coefficient shall be determined by the Food and Drug Administration Method using B. typhosus as the test-organism, and shall be clearly stated on the label attached to each shipping container[1].

7. It shall contain less than 5 per cent of benzophenol.

8. It shall make clear solutions with water of zero hardness at 20° C. (68° F.) within the concentration range of from 1 to 4 per cent; such solutions, when kept in closed containers, shall remain either practically clear or become only slightly opalescent when allowed to stand for 24 hours at 20° C. (68° F.) away from direct light.

9. It shall show no soap separation when cooled down to 0° C. and held at this temperature for three hours.

GROUP II.—PHENOLIC DISINFECTANT SOLUBLE TYPE (PHENOL COEFFICIENTS OVER 5)

General Requirements

10. The product shall be made from phenols of coal tar or petroleum origin, and an emulsifying agent.

11. It shall contain not less than 50 per cent of phenols.

12. It shall contain not more than 25 per cent by weight of inert ingredients water plus glycerine and organic solvents, if any).

13. The phenol coefficient shall be determined by the Food and Drug Administration Method using B. typhosus as the test-organism, and shall be clearly stated on the label attached to each shipping container[2].

14. It shall contain less than 5 per cent of benzophenol.

15. It shall make clear solutions with water of zero hardness at 20° C. (68° F.) at concentrations of 2 per cent or less; such solutions, when kept in closed containers, shall remain either practically clear or become only slightly opalescent when allowed to stand for 24 hours at 20° C. (68° F.) away from direct light.

16. It shall show no soap separation when cooled down to 0° C. and held at this temperature for three hours.

Certification and Labeling for Group I.

17. The following form of statement of labels[3], invoices, etc., is recommended:

"The ..... Company certifies this cresylic disinfectant to conform to all requirements of the standard adopted by the NATIONAL ASSOCIATION OF INSECTICIDE AND DISINFECTANT MANUFACTURERS, INC., and recorded as Commercial Standard CS71, Group I by the National Bureau of Standards of the U. S. Department of Commerce.
Phenol Coefficient ....."

Certification and Labeling for Group II.

18. The following form of statement on labels[3], invoices, etc., is recommended:

"The ..... Company certifies this phenolic disinfectant, soluble type, to conform to all requirements of the standard adopted by the NATIONAL ASSOCIATION OF INSECTICIDE AND DISINFECTANT MANUFACTURERS, INC., and recorded as Commercial Standard CS71, Group II by the National Bureau of Standards of the U. S. Department of Commerce.
Phenol Coefficient ....."

[1]This type of disinfectant is readily available with phenol coefficients ranging from 2 to 30, and higher. Contract buyers should specify the phenol coefficient desired.
[2]When used on labels this statement is in addition to, and not in lieu of, the ingredient statement required by the Insecticide Act of 1910.

[1]This type of disinfectant is readily available with phenol coefficients of from 1.5 to 5. Contract buyers should specify th phenol coefficient desired.
[2]This type of disinfectant is readily available with phenol coefficients of over 5 and up to 12, and higher. Contract buyers should specify the phenol coefficient desired.
[3]When used on labels this statement is in addition to, and not in lieu of, the ingredient statement required by the Insecticide Act of 1910.

Exporting Insecticides

(*From Page* 99)

mail, depending on the speed required.

I would like to tell you briefly of how our district offices fit into this rather complex, yet smoothly running machine for gathering and distributing essential commercial facts. All the services of the Bureau have to be gotten to the business man in his own territory. Without this field assistance, the Bureau services would be largely dissipated. When a business man wants help, he wants it in a hurry. He wants someone within convenient telephone call to whom he can put his problem, and get an answer. Our District Offices in all of the principal cities of the country are designed to serve just that purpose. We would like to call them the "service stations" of business because they are on the main arteries of trade, because they are equipped to take care of the business man's needs, and because they are ready and waiting when he wants them. These offices throughout the country are in reality little Departments of Commerce. All the information developed in Washington is sent out to them, especially that which concerns their area. As a result, each district office combines all the facilities of the Bureau in a single localized service to business.

It would be impossible in any address of reasonable length to give a complete account of the many services regularly performed by the Bureau of Foreign and Domestic Commerce. I have tried, however, in this little talk to give you a general idea of what you may expect from us. There is much I could say relating to our many domestic commerce services, but these are not being dealt with here because I was invited to discuss the foreign rather than the domestic trade field.

May I say in closing that we are always eager to have your problems, whether they relate to home or international trade. It is our aim to serve you and to supply comprehensive and absolutely unbiased information. I am sure you will understand that we have not the slightest purpose of trying to tell you how to run your business. We believe however, that we have an extraordinary opportunity to serve as your listening-post and intelligence service and thus assist you in gathering data essential to sound business practice whether at home or abroad.

Derris for Ants and Wasps

Destruction of the nests of carpenter ants and of wasp and hornet nests is easily accomplished with undiluted derris powder. W. Downes. *J. Econ. Entomol.* **32,** 883-4.

Control of Japanese Beetle

Tergitol 7 penetrant, a sulfated alcohol, has insecticidal properties and functions as a solvent and spreading agent for pyrethrum, made up in acetone and methyl isobutyl ketone. An aqueous solution of 0.02 per cent of total pyrethrins and 0.5 per cent of Tergitol 7 penetrant gave 85-100 per cent kill of the adult Japanese beetle. Of 26 species of plants tested with the material, 21 were tolerant, 4 were slightly injured and 1 was severely injured. Albert Hartzell and Frank Wilcoxon. *Contrib. Boyce Thompson Inst.* **11,** 83-6.

3 REASONS FOR SPECIFYING PARAPONT*

when you order para-dichlorobenzene!

1. "PARAPONT" IS PURE

Specify "Parapont" if purity is a requisite for the para-dichlorobenzene you use. Du Pont maintains the highest standards of purity in its manufacture—constantly. That's why you can be absolutely certain that every shipment of "Parapont" is white, free-flowing and lustrous.

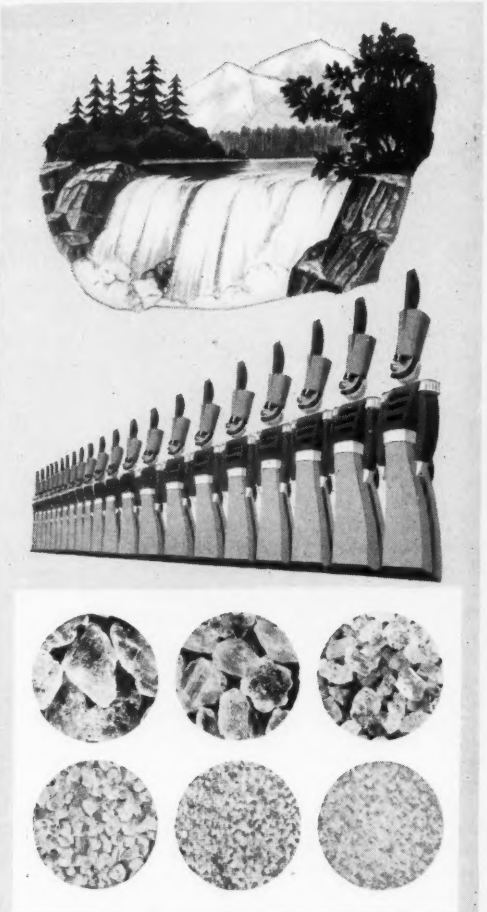
2. "PARAPONT" IS UNIFORM

Whether you order "Parapont" in single drums or in carload lots, you'll always get the same fine quality para-dichlorobenzene. "Parapont" users rely on this consistent uniformity. That's why so many of them have been re-ordering so often.

3. "PARAPONT" IS ADAPTABLE

"Parapont" is available in six granulations to fill every commercial need, in any quantity. And because Du Pont has an adequate supply always on hand, your order can be filled on the shortest notice.

*TRADE MARK



If you aren't a "Parapont" user, place a trial order with us. We are sure you'll be back for more.

DU PONT

E. I. DU PONT DE NEMOURS & CO. (INC.)

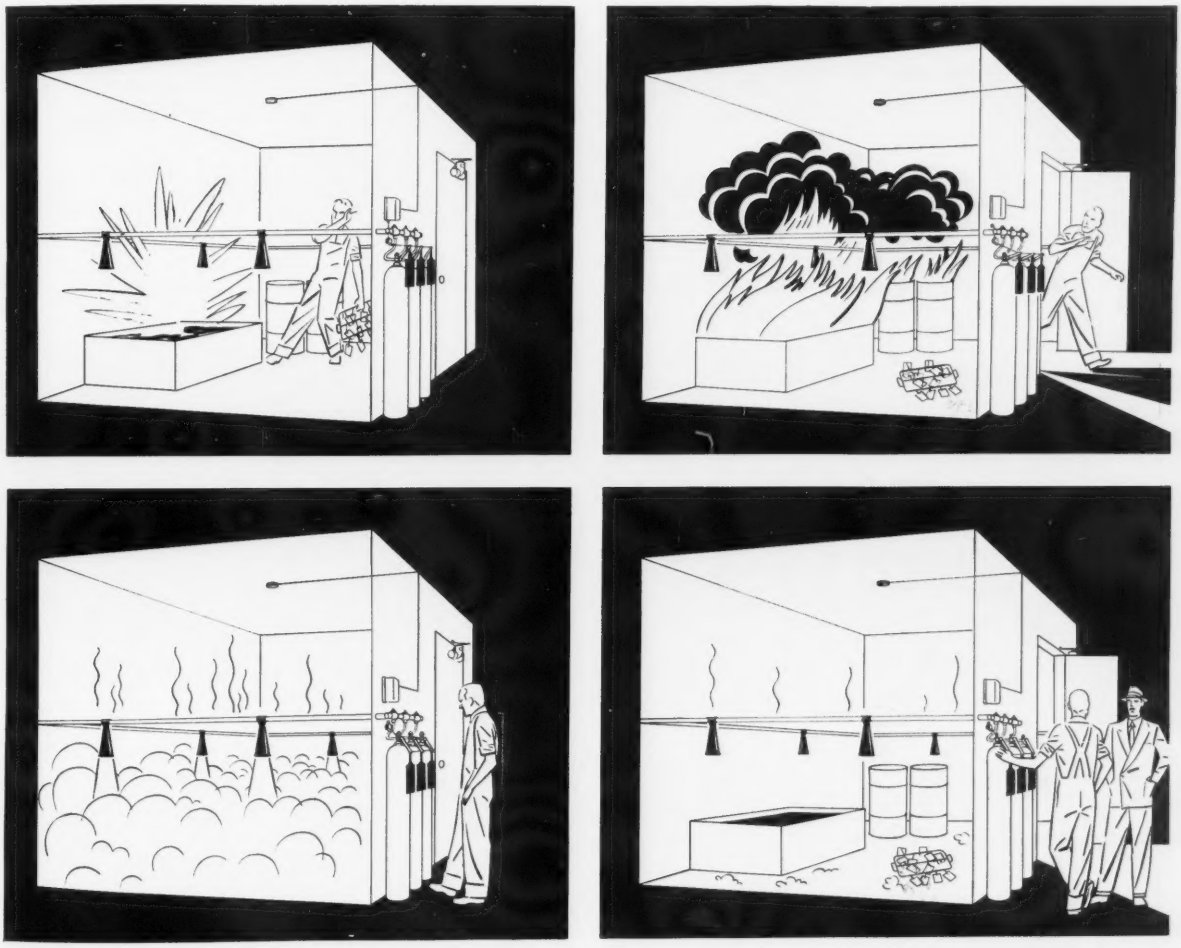
ORGANIC CHEMICALS DEPARTMENT • WILMINGTON, DELAWARE

FIRE PROTECTION
Against Flammable Liquids

By P. W. Eberhardt
Walter Kidde & Co.

MANUFACTURING processes involving the use of highly flammable liquids such as naphtha, kerosene, benzol, turpentine, etc., present a constant fire hazard, as every manufacturer knows. The suddenness with which fires of this type break out and spread often precludes fighting them by the usual means such as with water hose and regular fire extinguishers. Hottest and fastest are these liquid fires, taking place often with such swiftness that plant crews are demoralized. Effective fire fighting is frequently out of the question as immediate escape is imperative.

To combat these swift and vicious blazes in plants processing liquid insecticides, polishes, cleaning



The four stages of fighting a fire with carbon dioxide. 1. A "flash fire" starts in a flammable liquid in a room equipped with carbon dioxide extinguishers. 2. The only concern of the workman or workmen is to escape and avoid injury. Increase in temperature sets off the actuator on the ceiling which automatically opens valves on carbon dioxide cylinders where gas is stored. 3. Carbon dioxide rushes from nozzles and the inert gas envelops the room and tank. Oxygen content of the air is reduced from normal 21% to a point below which the fire cannot burn, that is to 14% or lower. 4. The fire is put out in 20 seconds, leaving no water damage or contamination of materials other than that caused by the heat of the fire itself.

Have You seen it?

KLEEN-AIRE

DEODORANT AND AIR CONDITIONER

The perfect health spray. Leaves a lasting, clean, refreshing odor. Helps prevent contagious diseases. Kleen-Aire eliminates odors of cooking, stale tobacco, smoke, paint, bath room odors, musty basements, domestic animals and other objectionable odors.

INSECTICIDE DISINFECTANT MANUFACTURERS

Endorsed for use in homes, theatres, hotels, hospitals, public buildings, stores, offices, funeral parlors, factories, apartments, banks, churches, phone booths, street cars and busses, taxicabs, restaurants, night clubs, lodges, -- in fact wherever there is need of an effective deodorizer and air conditioner.

For further details and prices write on your letterhead to:

THE CHEMICAL SUPPLY COMPANY

2450 CANAL ROAD CLEVELAND, OHIO

Disinfectants—Insecticides—Metal Polish—Dips—Oils—Sanitary Specialties

. . . good insecticides deserve to be applied properly . . . look into DULA sprayers.

STEAMASTER EXTERMINATOR

With steam serving both as an ingredient and as a force, the insecticide itself is held in moist suspension and the attack is made at full strength . . . thus guaranteeing a 100% thorough job of pest extermination. Completely enclosed heating element. Operates from any electric outlet. No fire hazard. Current shuts off automatically when water level drops below the level of the heating element.

Write Today for Complete Details, Prices and Descriptive Literature.

MOTORMATIC Electric SPRAYER

Designed for thorough pest annihilation . . . and at a saving of time, labor and money. Requires no preliminary preparations. Does not waste a drop of fluid. Gives Insecticide finest possible diffusion and longest possible floating suspension. Automatic shut-off. Operates simply and easily on any current. Heavy duty durable construction.

DULA MFG. CO. INC., 351 Atlantic Ave., Brooklyn, N. Y.

Manufacturers to the Wholesale Trade Only

fluids, disinfectants, and in oil and fat refining, and extraction where volatile solvents are commonly used, new fire fighting technique has been developed to eliminate the human element entirely. Sprinkler systems have been in use for many years in all sorts of factories and have proved very effective in automatically quelling ordinary fires. But burning solvents, oils, etc., do not constitute ordinary fires. These latter liquids will float on the surface of water and continue to burn, sometimes the flowing water acting as a means of spreading the fire. For this reason, automatic gas smothering methods, using inert gases to screen air away from the fire, have been developed and have been found effective. This system when arranged automatically takes for granted that employes will become panic stricken when fire strikes suddenly, and it leaves nothing for them to do but to retreat to safety.

This type of automatic fire-fighting equipment has been common equipment on modern motor boats for several years where the hazard of gasoline fires from accumulations in the bilge is great. Its use is spreading in industry where the more flammable liquids are in use. The gas used is carbon dioxide, sometimes called "dry ice" vapor, which is stored under high pressure in steel cylinders at a point near the hazard. Heat sensitive detectors are located on ceilings above the hazard, and within a few seconds after fire breaks out, the valves on the cylinders are automatically opened. The carbon dioxide rushes out through a piping system and billows into the room where the fire is burning, smothering it in a few seconds. The gas-and-snow functions by quickly cutting the oxygen content of the air to a point at which the liquid or vapor cannot burn. For example, gasoline requires 16 per cent or 17 per cent oxygen content in order to burn, and the carbon dioxide discharge quickly brings the oxygen content well below this combustion point.

In some plants, these flammable liquid processes are carried on in small room, and only a few cylinders of carbon dioxide are required to flood the entire enclosure. In other plants, where large areas can become contaminated with combustible fumes from low flash-point liquids, batteries of cylinders holding thousands of pounds of the gas are needed to cope with sudden flash fires which spread with amazing swiftness from room to room. In some processes, it is possible to arrange the pipes and discharge nozzles so that the gas clouds envelop only the point in the machine or the surface of the tank where the fire may break out. This latter method requires smaller amounts of gas.

In rooms which are completely flooded with carbon dioxide, automatic closing of doors and windows is employed to prevent escape of the gas. This is done by trip devices in the gas piping, which retract pins when the carbon dioxide rushes through, thus releasing window and fire-door chains. It is also possible to make the released gas shut off electric motors and pumps in the room. Where wall openings and ducts cannot be closed, screening nozzles are used to blow jets of the gas across the opening, shutting off the oxygen supply as effectively as a door.

Some of the flammable liquids which cause so many industrial fires are gasoline, naphtha, benzol, turpentine, oil, lacquer, paint, enamel, and many other solvents and chemicals of carbon derivation. Some of them give off flammable fumes at normal temperatures, while others are most dangerous when heated. All of them burn fiercely when they ignite, and water streams can rarely be used to extinguish them. Incidentally, static and electrical sparks cause about half of these fires, and many a disastrous blaze can be traced to an employee who has a faculty for collecting static in his body. Such human "spark plugs" need only pass near a metal object to cause a spark to jump, and a fire to break out.

Carbon dioxide or other inert gases are advantageous in fire fighting in that they are harmless, not only to human tissue, but also to goods and equipment which might be damaged by other fire-fighting materials, notably water. Carbon dioxide is low in cost, and is also quickly dissipated after the fire has been smothered.

Home-Made Stock Sprays

(*From Page* 95)

Home-made livestock sprays were prepared by steeping pyrethrum flowers, whole, and ground to a chaff and to a fine powder, in water-white kerosene. Bioassays were conducted under conditions simulating field use of livestock sprays. Hypnotic doses of steepates were administered to houseflies in an aerated spray tunnel. Recovery proceeded in a ventilated recovery cabinet. On the basis of a dosage-torpor curve, the effective pyrethrin content was calculated and compared with that of a spray made by diluting a commercial 20-to-1 pyrethrum concentrate.

Under proper conditions pyrethrins can be removed from coarsely ground pyrethrum flowers about as efficiently by steeping them in kerosene as by extracting with petroleum ether in a Soxhlet apparatus. There is little difference between solutions steeped 24, 48, and 72 hours. Steepates prepared by soaking coarsely ground flowers successively in two half-aliquots of kerosene for 24 hours each appeared to be the most toxic while those from whole flowers were the least toxic. Soaking the coarsely ground, powdered, and whole flowers successively in two half-aliquots of kerosene for 24 hours gave the greatest percentage efficiency in extracting the pyrethrins and in preparing the spray.

The cost of making home-made livestock sprays by various methods was compared with the cost of a diluted commercial concentrate and a commercial material. It was concluded that the dilution of commercial 20-to-1 pyrethrum concentrate was the best method of preparing livestock sprays on the farm or in the home.

Literature Cited

[1]Anonymous. 1938. Home-made insect sprays? **Soap** 14 (3): 98-100.

[2]Gertler, S. I., and Haller, H. L. 1939. The pyrethrin content of home-made fly sprays. **Soap** 15 (1):93-94.

[3]Gnadinger, C. B. 1936. Pyrethrum flowers. Ed. 2, 380 pp., illus. Minneapolis.

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Floor Waxes

Soap used as emulsifying agent in floor wax affects the product according to the composition of the soap. Sodium soaps give thicker emulsions, potassium soaps a smoother texture and lower viscosity. Oleates give greater liquidity than stearates. Excess soap should be avoided, and when made *en situ* excess alkali particularly avoided, as it may damage paint-like compounds on composition flooring. Ammonia is less damaging than soda or potash and the excess is volatile. Triethanolamine soaps are excellent emulsifiers and less damaging than the alkalies. The soda and ammonium salts of sulfonated castor oil are readily obtainable and provide greater stability to emulsions, a feature to be observed in the manufacture of polishes for export or for long storage.

The wax mixture contains hard wax such as carnauba, and soft wax such as paraffin or beeswax or both. The proportion of hard to soft wax may be 1:1 but varies considerably in commercial products. Suggested formulas are:

	Per Cent By Weight	
(a) Wax mixture	25	20
Stearic acid	2.5	2.5
(b) Turpentine	20	25
(c) Ammonia	—	2
Caustic potash	2.5	—
Triethanolamine	—	1.5
Water	50	49

Ingredients (a) are carefully melted together without overheating. To the mixture heated at 80-110°C. solvent (b) warmed to 50-60°C. is added with continuous stirring. Aqueous solution (c) is thoroughly stirred in. *Industrial Chemist* **16,** No. 2, 80 (1940).

Stable Hypochlorite

An improved product for forming aqueous solutions containing calcium ions and hypochlorite ions comprises a calcium hypochlorite containing upwards of 50 per cent of available chlorine and in intimate mixture tetrasodium pyrophosphate in a proportion approximating 0.1-8 per cent by weight of the hypochlorite. An inert diluent salt may also be present. Another mixture contains calcium hypochlorite containing upwards of 50 per cent available chlorine, 4-30 per cent of tetrasodium pyrophosphate based on the weight of calcium hypophosphate, and soda ash in a proportion in excess of the equivalent of the calcium present. Mathieson Alkali Works. Canadian Patent No. 387,143 and 387,144.

Textile Mildews

The occurrence of mildew in yarn or cloth is encouraged by mealy sizes, excessive alkaline treatment, strong chlorination and the nitrogenous decomposition of wool under harsh treatment. Cellulose provides nutrient for certain fungi, while silk gum and raw cotton contain enough albumin for others. An *Aspergillus* mold can grow in an acid condition after wool has been dyed.

Phenols and dibromophenol destroy molds but their odors are irritating. Formalin is good except on gelatin sizes. Borax and salicylic acid are useful on all sizes. Hygroscopic zinc chloride maintains the elasticity of the fiber, but unless it is washed out from the cloth before singeing there may be some tendering of the fabric. Sodium fluosilicate in amounts of one part per 400 parts of fabric by weight provides complete immunization. The non-toxic higher tertiary alkyl phenol and salicylanilides are improved agents for this purpose. Eric Hardy. *Can. Textile J.* **56,** No. 23, 34; through Chem. Abs.

Pyrethrum Extraction

During storage pyrethrum flowers lose 30-44 per cent of their toxicity in a year owing to reduction of the pyrethrin content. Pyrethrum extracts do not lose their effectiveness during storage, but when prepared by the cold method of Gnadinger and Corl, 0.03-0.05 per cent of the pyrethrins remain in the flowers. In tests of extraction by a hot method it was shown that the pyrethrins were sufficiently thermostable, and that 100 per cent extraction of pyrethrin I from the flowers was obtained in 6-8 hours. G. V. Leningrad **1938,** 111 pp.; through Blyumberg. *Lenin Acad. Agr. Sci.*, Chem. Abs.

Water Extract of Derris

Analysis of the water extract of derris and cube showed that from 24 to 41 per cent of the active insecticidal material in derris, cube and timbo can be removed by one aqueous extraction. Successive extractions remove more. If preserved against fermentation this active material is very stable. L. D. Goodhue and H. L. Haller. *J. Econ. Entomol.* **32,** 877-9.

Rice Oil

Japanese rice bran is reported to contain 15-20 per cent of oil which increases in acid value to a marked extent if not immediately expressed or extracted and refined. In one instance the fatty acid content rose from 3.9 to 9.3 per cent after storage for four months. By treatment to destroy the lipase immediately after expression, an oil with a very low free fatty acid content is obtained, which may even be used for edible purposes after dewaxing. Rice oil can be refined by repeated extraction with methyl or ethyl alcohol, which removes most of the highly colored free fatty acids such as oleic and linoleic acids, from the neutral oil. For soapmaking it is advisable to blend rice oil with fats such as coconut oil. *Manufacturing Perfumer* **11,** 149 (1940).

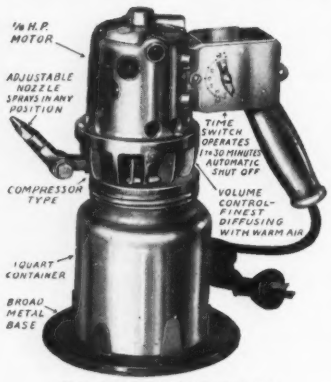
What's New in Soap Dispensers?

(From Page 27)

back and forth on each stroke, preventing any deposition of dried lather which might clog up the mechanism if left to accumulate. Another feature of this dispenser is its streamlined design making it easier to clean than some of the other styles.

Lather-type dispensers are particularly adapted for office buildings, public lavatories, etc., where their sturdy construction and economical operation can effect savings in upkeep and quantity of soap consumed. They are available for use also with

BUILD UP *YOUR* INSECTICIDE SALES
with
Breuer's TORNADO Electric Sprayers


⅛ H.P. MOTOR
ADJUSTABLE NOZZLE SPRAYS IN ANY POSITION
TIME SWITCH OPERATES 1 TO 30 MINUTES AUTOMATIC SHUT OFF
COMPRESSOR TYPE
VOLUME CONTROL-FINEST DIFFUSING WITH WARM AIR
1 QUART CONTAINER
BROAD METAL BASE

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Seven models to meet every requirement—1/8 to 1/3 H.P.—one pint to one gallon capacity—compressor and fan type—automatic and toggle switch models.

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TIME SWITCH OPERATES 1 TO 45 MINUTES AUTOMATIC SHUT OFF
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VOLUME CONTROL FINEST DIFFUSING WITH WARM AIR
COMPRESSOR TYPE
1 GALLON CONTAINER

Model 36

A powerful, automatic, compressor-type sprayer for efficient spraying of large areas. 1/3 H.P. GE Universal Motor; one gallon capacity. Adjustable nozzle; air volume control; thirty-minute automatic time switch. Approved by Underwriters' Laboratories.

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gravity feed systems equipped with the usual reservoirs for supplying a large number of valves over individual wash basins, having the well-known advantages of less servicing, and reduced breakage and theft.

THE use of molded plastic bodies for soap dispensers seems to be on the upswing of late. One new liquid soap dispenser of the push-in type recently put on the market has among other features a body made partially of a plastic material. This dispenser is equipped with a washer-less valve and an underslung glass or metal jar. According to the manufacturer, the elimination of washers in the valve should give it longer life and require less repair work than other dispensers. Whether the metal-to-metal valve fittings or the plastic body will be able to stand the punishment handed out to most dispensers is something that time alone will tell. Because of the saving effected in using plastic material to replace the usual metal body, this dispenser is offered at a much lower price than the average push-in liquid soap dispenser. Plastic bodies for soap dispensers incidentally are not new, having been used as far back as ten years ago.

Plastics are also being used in soap powder dispensers, one just introduced being made entirely of plastic material. It is of modern design and has an agitator and feeder combination at the bottom of the soap chamber which, it is claimed, will not let the soap pack. A regulated amount of powder is dropped into the hand at each turn of the molded geared dispensing wheel. A frequently mentioned criticism of soap powder dispensers as a group is that they are less economical than the liquid soap and lather varieties. Most people, it seems, are not familiar with the most satisfactory method of using dispensers. They take the soap in their hands before wetting them and flush most of it down the drain when they do wet their hands, much soap being wasted in this way. The inevitable spilling of soap powder on and around wash basins giving them a messy appearance is another disadvantage mentioned by some users of powder dispensers.

However, the increasing use of soap powder dispensers indicates that they are preferred for certain kinds of installations. In factories, work shops, laboratories, and other places where hands get very dirty, even a pure soap powder does a more effective job as it provides a slight abrasive action as well as a detergent action in the removal of grease and grime. In heavy duty work, soap powder dispensers find their natural place. On the other hand, many people say they consider soap powder to be easier on the skin than liquid soap for the reason that the coconut oil content of the powders is usually much lower than that present in liquid soaps. Indeed, many new styles of soap powder dispensers are finding wider use in offices, as well as factories.

Their simplicity of construction and their freedom from corrosion problems are distinct advantages for certain types of powder dispensers although many of them are made of cheap materials and do not stand up well under rough usage. A disadvantage of the majority of dispensers in this group is the ease with which they may be opened without key or special opener. Whenever a dispenser can be opened by anyone using it in a public place, trouble is bound to arise sooner or later from malicious persons pouring water into the powder.

There seems to be a trend in powder dispensers toward more use of metal in their construction and less use of glass. One model recently put on the market is made of thin enameled metal. It has concealed fastenings for attaching to the wall, making it theft-proof. A turn of the crank handle on the side causes a paddle to revolve which allows a measured amount of powder to fall out the bottom.

The dispensers mentioned above are but a few of the myriad styles and types available to the soap manufacturer and jobber. There is another large group of soap dispensers which are not found on the open market. They are all made expressly for certain soap manufacturers according to the manufacturers' specifications and are designed for dispensing one particular kind of soap only. A rather novel dispenser which falls into this classification employs a solid bar of hard, specially dried soap. At each turn of the crank on the front of the dispenser, the cylindrical bar of soap revolves against three saw-edged knife blades which scrape off enough soap in powder form for one hand-washing. This dispenser, like most of those in the same category, is well made and its main reason for existence is to provide an outlet for the manufacturer's soap. It is sold only through controlled distributing channels and not to the trade generally. That only one brand of soap can be used is the obvious drawback of dispensers in this group.

Perhaps this common tendency to regard a soap dispenser,—not as a mechanical device, to be designed according to the best engineering principles, but as a means of perpetuating the sale of some particular manufacturer's soap,—is one of the chief causes for much of the dissatisfaction in dispenser distribution and use. Add to this the fact that many short-sighted distributors will regularly supply equipment which has nothing except a low original cost to recommend it, and there is an explanation for most of the headaches connected with soap dispensers.

In the long run, the distributor will have fewer complaints, fewer dispensers returned for repair or replacement, and will keep more of his customers, if he sticks to soundly designed dispensers that have actually proved themselves in use,—in a price range that will allow of use of corrosion resistant metals and accurate machining and fitting of the moving parts. And even with dispensers of this type he must keep pounding away at the necessity of regular and intelligent serving on the part of those in charge of their upkeep. Only in these ways can the headaches in dispenser operation be cut below their present high level.

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You perhaps have noticed that if a customer complains about the job done on his floors, he considers only appearance and forgets about the price.

That's because pride in appearance is a big factor—almost as big as proper protection of the surface.

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Pat. Sept. 1934 Pat. Aug. 1938

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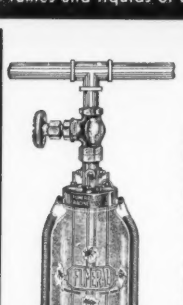
WE SPECIALIZE

• Since 1932 we have specialized in the design and manufacture of various Stationary and Portable liquid diffusers and sprayers for the commercial dispersion of insecticides, disinfectants, deodorants, fumigants, chlorines, caustic soda solutions, perfumes and liquids of all kinds.

STATIONARY

2, 3, 4, or 6 Nozzles.

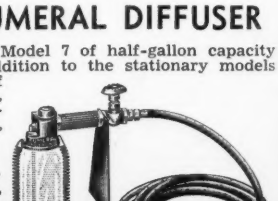


For dairies, cheese factories, and ice cream plants, we recommend the Model A of one-quart capacity. Install one unit for every 10,000 to 12,000 cubic feet of space, two for 25,000 cubic feet, and so on.

For larger space fumigation such as in flour mills, bottling plants, packing plants, breweries, etc., we recommend the Model B, of half-gallon capacity. Install one unit for every 25,000 cubic feet, two for 50,000 cubic feet, and so on.

PORTABLE FUMERAL DIFFUSER

The Portable Fumeral Model 7 of half-gallon capacity is extensively used in addition to the stationary models for local treatment of machinery, mill leggings, closets, etc.; also for treating grain, carloadings, greenhouses, etc.



For exterminating service in schools, theatres, laundries, barracks, moving vans, railroad freight, passenger and dining cars, airplanes, on merchant and passenger ships.

• Fumeral Stationary and Portable Diffusers are recommended and sold by leading manufacturers and distributors of insecticides and fumigants. See 1939 "Soap Blue Book." Write for illustrated literature, "Modern Warfare On Insects," data, and prices.

FUMERAL COMPANY

RACINE, WISCONSIN

We do not sell insecticides or fumigants.

News.....

Purchases Western Chem. Co.

Empire Chemical Co., Los Angeles, manufacturer of a line of chemicals and janitors supplies, has recently purchased Western Chemical Co., also of Los Angeles, manufacturer of "Hy-Ge-No" bowl cleaner, deodorant and disinfectant. The new division of Empire Chemical Co. plans to embark on a nationwide sales promotion in the near future to push "Hy-Ge-No." I. Shapiro will manage the campaign.

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Amer. Home Prods. Profits Up

American Home Products Corp., Jersey City, has just reported a consolidated net profit for the six months ended June 30 of $2,158,109, or $2.68 each on 806,465 average common shares of stock. For the first half of 1939, net profit was $2,009,181, or $2.49 each on 804,509 shares. For quarter ended March 31, 1940, the company reported a net profit of $1,234,116, or $1.53 each on 805,772 shares.

—— ♦ ——

Define "Bordeaux Mixture"

Regulations restricting the use of the name "Bordeaux Mixture" in the State of California, exclusively to the reaction product of copper sulfate, quick lime or hydrated lime and water have just been issued by Dr. Alvin J. Cox, chief of the Bureau of Chemistry, California State Department of Agriculture. The new regulation, which became effective July 1, was preceded by several conferences with interested persons. It was pointed out that in recent years, with the introduction for use on citrus of sprays of zinc, manganese, and iron sulfates, together with hydrated lime, and the combination of these sprays with varying amounts of "copper sulfate-hydrated lime," that there has been a tendency to extend the use of the term "Bordeaux Mixture" to these variations whether or not any copper sulfate and hydrated lime is present. This practice was considered liable to lead to confusion, and is now prohibited under the new ruling. In the future such modified products may not be called "Bordeaux Mixture," but must be referred to as "Zinc Manganese Lime Mixture," "Manganese Iron Lime Mixture," etc.

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Bill Bjork on Mend

William Bjork of L. Sonneborn Sons, New York, who was injured severely in a recent automobile accident is recuperating in the Yonkers Hospital. He suffered injuries to his knee which have delayed his return to active duty.

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Promote Sales with Premiums

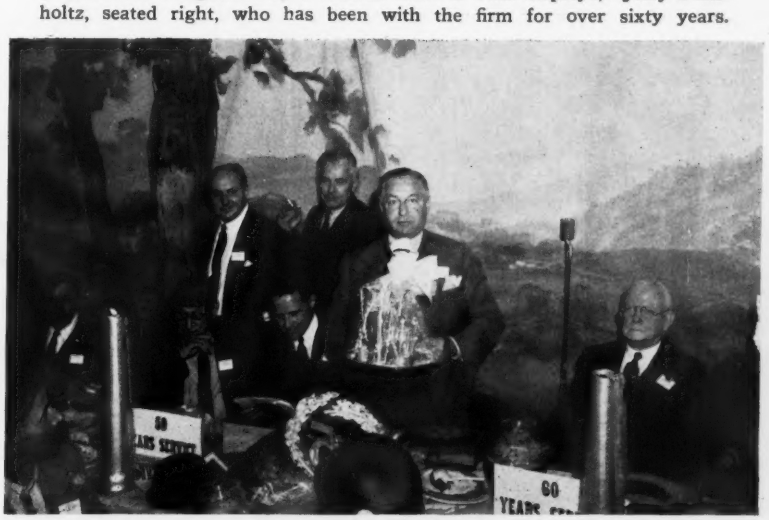
Successful use of premiums by Wilbert Products Co., Brooklyn, manufacturer of the "No-Rub" line of waxes and polishes, is the subject of an article in the July issue of *Printers' Ink Monthly*. Premiums provide something new for salesmen, dealers and distributors to talk about in the sale of a product, says Robert S. Wheeler, Wilbert advertising manager. The popularity of premiums such as scissors, aprons and flower seeds which have been used to boost the sale of "No-Rub" products indicates they have found a way to lift the sales story out of the ordinary routine. The products are packaged with eye-catching labels pasted around the bottom of the container to call the customers' attention to the premiums offered. From the character of the three premiums mentioned above it is evident that the Wilbert company lays no emphasis on having the premiums related strongly to the products themselves. In fact, they have found that unrelated premiums pull sales more strongly than closely related premiums.

—— ♦ ——

Crow Repellent Stipulation

Cedar Hill Formulae Co., New Britain, Conn., dealer in "Stanley's Crow Repellent," has entered into a stipulation with the Federal Trade Commission in which it agrees to cease making certain claims for the product. The company agrees to stop representing that the crow repellent will afford absolute protection for planted seed corn from molestation by insect or animal pests; that it is more effective than any other material; that it is non-poisonous; does not affect germination in any way, or will insure a good crop.

Edward Plaut, president of Lehn & Fink Products Corp., Bloomfield, N. J., was feted by Lehn & Fink employees last month on the occasion of his celebration of his twenty-fifth anniversary with the company. On behalf of the employees Mr. Plaut was presented with a silver coffee service, the presentation being made by a veteran Lehn & Fink employe,—Jerry Farnholtz, seated right, who has been with the firm for over sixty years.



Adam Breuer Dies

Adam A. Breuer, president of the Breuer Electric Manufacturing Co., Chicago, and widely known throughout the insecticide industry, died suddenly of a heart attack at his home in Glencoe, Ill., on July 30. He was active in insecticide affairs, especially in the work of the National Association of Insecticide & Disinfectant Manufacturers, having been chairman of the entertainment committee at the recent convention of this association at Lake Wawasee, Ind. Funeral services were held on August 1 at the Lakeview Presbyterian Church, Chicago, in which he had been active for some years. Interment was at Rosehill Cemetery, Chicago.

Adam Breuer was born on Sept. 11, 1883, at Chicago. For many years, he was associated with the Clements Manufacturing Co., Chicago, from 1916 to 1927 being vice-president and sales manager. In 1927, he founded the Breuer Electric Manufacturing Co. to manufacture electric sprayers, vacuum cleaning equipment, etc., and was very successful in his own business. He is survived by his wife, Beulah Breuer, two sons, Grant William Breuer and Adam Arthur Breuer, Jr., and a daughter, Beulah. Henry Breuer, brother of Adam, and Roy Breuer, nephew, will continue actively in the business. Grant W. Breuer, the oldest son, will become active head of the firm.

A. A. BREUER

Hollingshead Plant Burns

The five-story chemical specialty plant of R. M. Hollingshead Co. at Camden, N. J., was completely destroyed in a disastrous fire on the afternoon of July 30th, with a loss of several lives and damages which may reach as high as $2,000,000, according to early newspaper accounts. The fire, which started in the main plant, spread very rapidly, fed by stocks of inflammable chemicals. Newspaper accounts report a series of explosions which shook surrounding buildings. The main offices of the company, across from the plant were not destroyed, although 67 nearby dwellings in a four-block area were swept by the flames. Fire companies summoned from Philadelphia and nearby towns fought the blaze for hours and many of the 180 reported injured were firemen struck by falling debris. The known dead included Raymond Harter of the Hollingshead staff. Employees reported missing were Nathaniel Banks, James A. Bordeaux, William P. Bennett, Mrs. Bessie Busa, Agnes Miller, Laura Jacobowski and Mrs. Bida Babcock. The company employed 150 workers. Products manufactured included polishes, insecticides, disinfectants, cleaning fluids, liquid soaps and allied products. An important part of the Hollingshead business is the manufacture of materials for the government on contract, and at the time of the fire the company was reported working on an order of gun paint for the U. S. Navy. R. M. Hollingshead, Jr., company president, who joined personally in fighting the fire, declared he saw no likelihood of sabotage.

N.A.I.D.M. MEETING

The 27th annual meeting of the National Association of Insecticide & Disinfectant Manufacturers will be held at the Hotel Roosevelt, New York, on December 2 and 3, 1940, according to an announcement by W. J. Zick of Stanco, Inc., president of the Association.

Lambert Co. Earnings Down

Lambert Co., New York, recently reported a net income of $539,672, or 72 cents a capital share, for the six months ended June 30. For the same 1939 period, net income was $652,657, or 87 cents a share. Net profit for the quarter ended June 30, was $100,432, or 13 cents a share as compared with $219,214, or 29 cents a share for the same 1939 period.

Name A.C.S. Meeting Chairmen

Harvey M. Merker, superintendent of manufacturing of Parke, Davis & Co., Detroit, has been named co-chairman of the 100th national meeting of the American Chemical Society in Detroit, Sept. 9 to 13, it was announced recently. Ralph D. Hummel, Arthur M. Holmes, Leon A. Sweet and Oliver Kamm, also of Parke, Davis & Co. are among the members of the committee. All of the society's eighteen professional divisions will be in attendance, and several hundred papers and speeches will be presented. The role of chemistry in the nation's defense is to be the theme of the discussions.

Enter Solvent Stipulation

General Household Corp., Los Angeles, manufacturer of a solvent for cleaning household materials, has entered into a stipulation with the Federal Trade Commission in which it agrees to cease representing its product is a moth preventive. The company also agrees to cease claiming that the product is a deodorant in the sense that it destroys offensive odors; that the product "will not ring" or result in the formation of a ring when it is applied to the spot to be removed; or that the "most inexperienced" person can apply the product to fabrics without the resultant "ring" formation.

Durham Chem. Co. Suspends

Durham Chemical Co., New York, insecticides, maker of "4-Cide," has recently gone out of business. Arthur Eisen headed the concern.

New Pyrethrum Labels Effective September 1

NEW labeling requirements for pyrethrum powder, pyrethrum powder mixtures, and other pyrethrum products containing inert ingredients, but not applicable to those consisting exclusively of pyrethrum extract in mineral oil, according to regulations issued last January by the Insecticide Division of the Department of Agriculture, become effective Sept. 1 next, as originally announced. These regulations call for a statement of active ingredients (pyrethrins), or inert ingredients, which heretofore has not been required on pyrethrum powder or pyrethrum mixtures. Attempts to secure a postponement of the effective date for one year and other changes in the regulations by the National Association of Insecticide & Disinfectant Manufacturers have been successful. The regulations apply to all pyrethrum insecticides, except petroleum base fly sprays and stock sprays, which may be shipped in interstate commerce on or after September 1, 1940.

The appeal of the National Association to the Department of Agriculture to postpone enforcement of the new regulations until next year was based on several points, chief of which were the lack of data on pyrethrum deterioration, inexperience with the Mercury Reduction Method of testing in the trade, and the belief that small manufacturers would be particularly handicapped and penalized because of limited laboratory facilities. It was also pointed out that possibly the Department of Agriculture might define the term, "Insect Powder," in such a way that no pyrethrum powder running under 0.5 per cent pyrethrins could be called "pyrethrum powder" or "insect powder." This would mean, according to the arguments presented, that it would be unnecessary to state the pyrethrins content on the label, merely giving the percentage of "insect powder" or "pyrethrum powder" which material would have to meet or exceed the set minimum of 0.5 per cent pyrethrins. This plan, it was indicated, would very effectively eliminate all low-grade pyrethrum powder from the market as such and compel it to be used in extract manufacture and in agricultural and other mixtures. Department officials stated that under the law they had no authority to define or redefine the term, "insect powder," and that such a suggestion could not be considered.

At the informal conference at the Department of Agriculture, held July 10, the request of the National Association for a postponement was presented by Dr. A. E. Badertscher of McCormick & Co., chairman of the Insecticide Scientific Committee; Dr. G. A. Bowden of the A. S. Boyle Co., H. C. Fuller, technical consultant for the N.A.I.D.M., and Ira P. MacNair, secretary of the N.A.I.D.M. The manufacturers were advised by Department officials to take immediate steps to comply with the law, if they have not already done so, and that officials will be glad to cooperate with and instruct those manufacturers who are faced with difficulties in the preparation of labels for their products. However, it was also indicated the full enforcement of the regulations would go into effect definitely on Sept. 1.

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Mosquito Control

Both the larval and pupal stages of mosquitoes can be killed with a pyrethrum emulsion made up according to the following specifications: Liquid soap (actual soap 40 per cent) 5 gallons, fuel oil or high-grade kerosene 95, pyrethrum extract (20-1) 5, and water 45 gallons. Pour the water into the soap and agitate until a heavy foam is formed. Combine the fuel oil with pyrethrum, then pour into the soap and water and agitate for at least 30 minutes. The resulting concentrated emulsion mixes readily with water. The fuel oil should have the following specifications: sp. gr. 32-37°Be., flash 150 P.F., cold 0°F. pours, boiling at 350-675°F., viscosity 50-100 Saybolt per second, surface tension 20 dynes. The color is straw. In using the stock emulsion it is diluted with 12 parts of water and is used at the rate of about 25 gallons of finished spray per acre. E. I. McDaniel. *Michigan Agr. Expt. Sta., Quart. Bull.* **22,** 32-4; through *Chem. Abs.*

—— ♦ ——

Pyrethrum for Black Flies

A pyrethrum extract in an emulsified petroleum oil, New Jersey formula, was found effective against black flies. R. D. Glasgow. *J. Econ. Entomol.* **32,** 882-3.

—— ♦ ——

Penetration of Waxes

The melting point is considered to be inadequate for the evaluation of waxes. In order to obtain an indication of the hardness of wax the type of penetrometer used in the asphalt industry has been adapted. Results show that although a synthetic wax may have a melting point of 96°C. its penetration may be 32 (the higher the figure the greater the penetration). Such a wax would thus be much softer than a montan wax with melting point of 74°C. and a penetration value of 5. A few values obtained include carnauba wax, m.p. 83°C., penetration 1; ozocerite ceresine m.p. 92°C. and penetration 5; and Borneo paraffin wax m.p. 63°C. and penetration 11. In determining the melting point of blends of waxes it is essential to use methods depending on latent heat such as cooling curves. It has been found that the drop-point method may give results which are too high owing to the higher melting constituents retaining the structure of an otherwise molten wax. Edmund Graefe. *Petroleum Z.* **35,** 223-6; through *Chem. Abs.*

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Criticize Insecticide Bids

Criticism of bids for liquid insecticide to be supplied to the Veterans' Administration, Washington, D. C., recently filed, have come from manufacturers. Under the new specification of the Veterans' Administration, VA-G-100g, issued May 31, 1940, approximately thirty bids were entered last month covering 3,300 gallons of liquid insecticide. These bids ranged from $1,237.50 up to $7,427.00 for the quantity, or from 37c up to $2.25 per gallon. Low bid was filed by R. M. Hollingshead Corp., Camden, N. J., and the top bid by McCormick & Co., Baltimore. Other bids covered the range in between. The wide variation in the bids was the occasion for the criticism of the specification of the Veterans' Administration under which they were made. This calls for an 85 per cent kill in 24 hours by the Peet-Grady Method when adjusted according to the Ford Method as published in *Soap & Sanitary Chemicals*, June, 1937, issue. A further protest against the specification to the Veterans' Administration is reported being filed.

Seek Insecticide for Tomato Use

An insecticide which can be substituted for the sulfur treatment previously recommended for psyllid control on tomatoes is being sought by Colorado entomologists. Excessive use of sulfur to combat serious outbreaks of psyllids in tomato fields killed the bugs but when the fruit was canned packers found that the containers would swell and burst. This was traced to the sulfur which could not be completely removed from the ripe tomatoes. The annual report of Colorado Agricultural Experiment Station's entomology department says further experimentation is needed to find a substance other than sulfur and to determine a suitable time for application, so that the fruit can be left in condition suitable for canning.

Rat Preparation Stipulation

A. J. Child & Sons Mercantile Co., St. Louis, has just entered into a stipulation with the Federal Trade Commission, Washington, D. C., in which it agrees to cease certain representations in the sale of a rat killing preparation. The Child Co. agrees to stop claiming that its product, "Black Cat Rat and Mouse Killer," will drive rats outside to die, unless it is explained in a conspicuous manner that their burrows and habitats must be outdoors before it will do so. The company also agrees to cease representing that the product will kill mice.

Form Excel Chem. Co.

Excel Chemical Co., Milwaukee, has recently been organized by E. F. Gerke, vice-president, and R. J. Ross, secretary-treasurer, at 545 South 84th Street. The new company manufactures liquid soaps, disinfectants, insecticides, floor waxes, floor seals, soap chips, deodorants, sweeping compounds, and boiler conditioners.

Test "Quinsana" Advertising

Mennen Co., has just started a ten-week test advertising campaign for "Quinsana" for athletes foot, through H. M. Advertising Agency, New York.

Powell Employes Picnic

The first annual outing and games of the employes of John Powell & Co., New York, was held on June 29 at Karotsonyi's Inn at Glenwood Landing, L. I. and attended by 78 employes and members of their families. Following a series of games and races, a steak dinner was served. In a special softball game between members of the plant and office staffs, the factory team won by a score of 9 to 1. Dr. Alfred Weed was captain of the office team and Joseph Weisnet captained the plant crew. General arrangements for the outing were in charge of David G. Hoyer, assisted by William Gavaghan of the plant staff. G. R. Rinke acted as umpire in chief for the ball game and escaped without serious cuts or bruises.

Appoint Kennedy Branch Mgr.

R. T. Kennedy has recently been appointed manager of the Jersey City branch of Pennsylvania Refining Co. of Butler, Pa. Mr. Kennedy has been associated with the petroleum industry for many years in a sales executive capacity, his experience being chiefly with petroleum specialties.

To Operate Plastics Plant

Baldwin Laboratories, Inc., Saegertown, Pa., manufacturer of insecticides and repellents, plans to build and operate a plant for the production of plastics in Franklin, Pa., to be known as Franklin Plastic and Die Casting Co. L. W. Robinson, Jr., Pittsburgh, and William S. Perry, Oil City, vice-president of the Baldwin firm, will head the new concern.

Answers to Questions in Baird & McGuire's

Disinfectant Test Quiz

(See Page 88 for Questions)

1. Right. For all practical purposes the terms Disinfectant and Germicide are interchangeable.

2. Wrong. Disinfectants are for use on inanimate objects. Antiseptics are intended for use on the human or animal body.

3. Wrong. The phenol *content* has no bearing on the phenol *coefficient* of a disinfectant. The phenol *coefficient* covers the strength of the product and the phenol *content* merely states how much Carbolic Acid is present.

4. Wrong. Just the reverse, the Technical Cresylic Compound is usually at least twice as strong germicidally as the Cresol Compound U.S.P.

5. Wrong. Just the reverse, disinfectants containing *over* 5% phenol must be marked POISON. If less than 5% phenol is present the poison label is not necessary. (We refer to Coal Tar and Cresylic Disinfectants).

6. Right. A coefficient 5 disinfectant should be diluted 1 part disinfectant to 100 parts of water or 20 times 5, the coefficient figure.

7. Wrong. Deodorants are not always disinfectants. Neither are disinfectants always deodorants.

8. Wrong. Disinfectants should be mixed with soft water for best results.

9. Wrong. A Pine Oil or Coal Tar Disinfectant must contain *not over* 10% water to meet Bureau of Standards specifications.

10. Wrong. Cresylic Disinfectants must contain at least 50% Tar Acids (to meet Bureau of Standards specifications).

11. Right. Soap has never been officially recognized as having disinfecting properties.

12. Wrong. Per unit of coefficient value High Coefficient Disinfectants are much more economical than Low Coefficient Disinfectants in general use.

13. Wrong. Germicidally they are alike but one maybe manufactured from high grade chilled oils, the other from low grade oils full of naphthalene which will cause trouble and separation in cold weather. One grade may make perfect emulsions with water, the other grade may show oily float or dirty sediment.

14. Right.

15. Wrong. Coal Tar Disinfectants form white or milky emulsions in water.

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San Francisco—E. M. Walls
Danbury, Conn.—J. E. Pike
Cincinnati, Ohio—E. J. Moriarty
Canada—Harrisons & Crosfield, Ltd.
Montreal, Toronto and Vancouver

New Patents

(*From Page 67*)

dient, admixed with a finely divided inert material, and characterized by ready dispersibility in aqueous media for the formation of an aqueous suspension suitable for spraying.

No. 2,205,328, Extruding Machine For Soap and Other Plastic Materials, patented June 18, 1940 by Arnold Frank Wills, Burnham-on-Sea, England, assignor to W. & F. Wills, Limited, Bridgwater, England. An extruding machine of the character described comprising a chamber, a grid dividing the chamber into upper and lower compartments, which upper compartment has at the top a feed inlet for receiving plastic material, and which lower compartment has at the bottom at least one outlet for giving the extruded material the required shape as to its cross-sectional area, rotary expelling means comprising two pairs of intermeshing toothed wheels operable in tandem, one pair in each compartment, the wall of which chamber has a port situated under the grid for placing the upper part of the lower compartment into open communication with an exhausting device, each of which pairs of wheels is situated in a part of its compartment having opposite concave wall-portions that are of a curvature struck respectively from the axes of rotation of the wheels and that lie adjacent to the peripheries of the wheels, all of which rotate in such a direction that the material above each pair of wheels is driven by their teeth in a direction towards the concave wall-portions, around the outside of the wheels and downwards towards the outlet, and feed means comprising two pairs of feed rollers, one pair in each compartment allotted to the pair of toothed wheels therein, the two feed rollers of each of which pairs are arranged spaced apart towards opposite sides of the allotted pair of intermeshing wheels at the side thereof remote from the outlet.

Large-Scale Spraying

To atomize disinfectants, antiseptics, or insect sprays in large rooms, halls, etc., the Sani-Fogg is a new type of equipment built by the Brown Corporation of Syracuse. It is an electric-motor driven turbine fan with two spray nozzles, tank, etc., mounted on a cart.

Monsanto Sales Up 27%

Sales volume of the American companies of Monsanto Chemical Co., St. Louis, Mo., during the second quarter of 1940 was approximately 27 per cent above the sales for the comparable 1939 period and pay rolls were 14 per cent greater Edgar M. Queeny, president, reported to stockholders recently. Net income for the second 1940 quarter amounted to $1,465,689, as compared with $918,831 for the second quarter of 1939.

Heads Neville Research

Dr. Paul V. McKinney has recently been appointed director of research for the Neville Co., Pittsburgh, coal tar products. Dr. McKinney was formerly Senior Fellow in research for the Texas Gulf Sulfur Co. at Mellon Institute. Before this, he had been engaged for a number of years in catalytic research for Phillips Petroleum Co. and at Princeton University. Neville Co. is doubling the size and facilities of its research laboratories.

$5,000 for Chicago Rat Control

Chicago's city council has approved an appropriation of $5,000 for rat extermination work under supervision of the Commissioner of Public Works. Just how the money will be used has not been revealed. Meanwhile protest meetings go on, the latest reported having been an open air gathering in a public park on July 12. Here several hundred representatives of thirty-six organizations in the 47th Ward launched a voluntary cooperative drive against the rodents which swarm in alleys of this congested district.

Elliott To Address PCO's

The toastmaster at the Eighth Annual Convention Banquet of the National Pest Control Association to be held at Indianapolis, Ind., Oct. 28-30, will be the president of Purdue University, Dr. Edward C. Elliott, a national figure in the field of education, a forceful speaker and one who has materially aided the pest control industry. It was because of his sympathy and approval that the first regional pest control operators conference was held at Purdue University in 1937. It has continued as an annual event since that date.

Edgar J. Boyd Dead

Edgar J. Boyd, retired secretary and treasurer of Dixie Disinfecting Co., Dallas, died suddenly last month at his home in Dallas. Mr. Boyd, who was born in Tuskegee, Ala., in 1874, had been associated with Dixie Disinfecting Co. for fifteen years at the time of his retirement five years ago. Before joining the Dixie company, he was president and owner of Boyd Publishing Co.

Cleaning in Ice Cream Plants

A discussion by M. J. Prucha, Department of Husbandry of the University of Illinois, of washing powders and chlorine sterilizers suitable for use in cleaning operations in dairy and ice cream plants is presented in the July issue of the *Ice Cream Trade Journal* under the title, "Cleaning Agents, First Line of Defense in the War on Bacteria." Mr. Prucha mentions the various chemical compounds commonly used for cleaning purposes adding that "the ideal washing powder" is not available. He describes the ideal preparation as one that would remove quickly the various kinds of dirt from the utensils, would not be corrosive, and would rinse off easily, leaving the utensils clean and shiny.

Water-soluble Disinfectants

The phenol coefficient of water-immiscible coal-tar disinfectants made miscible by mixing with 50 per cent sulfonated oil adjusted to faint alkalinity to phenolphthalein, was unaltered upon standing for two years. The phenol coefficient of cresol made water-miscible by the use of sulfonated castor oil is the same as that of *liquor cresol saponatus* when it contains the same amount of active ingredients. The toxicity of cresol-sulfonated castor oil mixtures is such as not to mitigate against their use externally on the body or for general household use. Sulfonated castor oil is highly recommended for making cresol and other coal-tar disinfectants water-miscible. Louis Gershenfeld and Bernard Witlin. *Am. J. Pharm.* **112**, 45-50 (1940).

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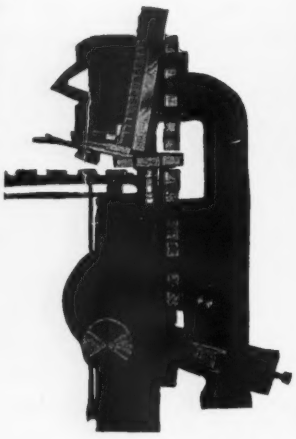

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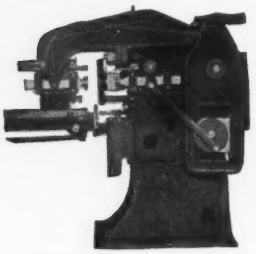

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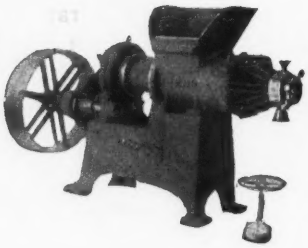
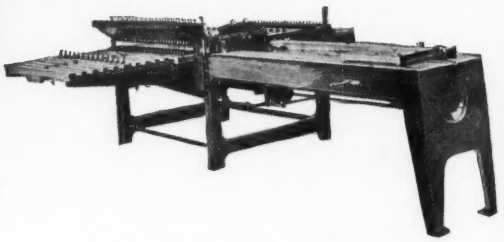


Single screw soap plodders with 6, 8, 10 or 12 inch screws. All completely rebuilt and unconditionally **guaranteed.**



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2, 3, 4, 5 and 6 roll Granite Toilet Soap Mills.
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Gedge-Gray Mixers, 25 to 6000 lbs. capacity, with and without Sifter Tops.
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Proctor & Schwartz large roll Soap Chip Dryers complete.
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All types and sizes—Tanks and Kettles.
Ralston and H-A Automatic Cutting Tables.
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Chemist: Man with practical laboratory background in drugs, soaps, cosmetics, desires position in laboratory or plant of manufacturing. 28 years of age; graduate of chemistry from recognized university. For further details communicate with Box No. 873, care *Soap*.

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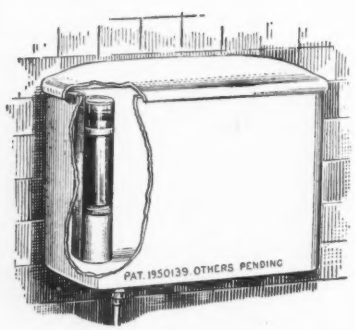

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Concealed Guardian of the Modern Bath Room

CREATES NEW MARKET FOR YOUR PINE OIL

STERYL-FLUSH disinfects, deodorizes and keeps the entire toilet system clean. Does not cover up offensive odors, but removes them completely. STERYL-FLUSH fits inside the toilet tank where it operates unseen. It operates only when the toilet is used by flow of water. Non-corrosive and non-injurious to the hands. Pleasantly scented with pure pine oil—just enough to give the bath room a faint, cleanly odor of careful attention to sanitation.

SOLD EMPTY OR FILLED

STERYL PRODUCTS CORP.

112 S. 16th Street Philadelphia, Pa.

Positions Open

Wanted: Soap maker and Superintendent. Must be able to furnish A-1 references and be well versed in manufacture of laundry soaps as well as production end. Give all particulars in first letter. Address Box No. 866, care *Soap.*

Wanted—Soap Superintendent: Man with several years practical experience, capable of operating soap plant manufacturing textile and laundry soaps, is needed by well-known soap manufacturer. Give experience, education and where employed during past five years. Address Box No. 872, care *Soap.*

Soap Executive Wanted: Man wanted for responsible position with large organization. He must have a close knowledge of the commercial side of soap manufacture, selling, etc., and must have had experience with one or two well-known soap companies. The man should be not under 35 or over 50. Preferably he should have a college background and considerable executive experience. Details may be sent in complete confidence to Box No. 871, care *Soap.*

Miscellaneous

For Sale: 125-H.A. 1200 lb. Soap Frames; Garrigue Glycerine Evaporator, 225 lb. per hour; Proctor 3 section Soap Chip Dryer with 36" dia. roll; H.A. 22" Soap Chipper; Jones Automatic Soap Press; Pumps, Kettles, etc. Send for complete lists. Brill Equipment Corporation, 183 Varick Street, New York, N. Y.

Floor Brushes—We manufacture a very complete line. Catalogue sent upon request. Flour City Brush Company, Minneapolis, Minn., or Pacific Coast Brush Co., Los Angeles, Calif.

Factories Started—remodeled. Instruction in laundry and toilet soap processes and preparations; perfumes; glycerine recovery. Address English or Spanish, Box No. 876, care *Soap.*

For Sale: One hundred twenty-five used Bobrick Soap Dispensers at 40 cents each for quick disposal. Address Box No. 868, care of *Soap.*

TAR ACID OIL

for use in

DISINFECTANTS

Makes White Emulsions.
Unusually High in Tar Acids

MANUFACTURED FROM
LOW TEMPERATURE COAL TAR

PITTSBURGH COAL CARBONIZATION CO.

H. W. Oliver Building Pittsburgh, Pa.

Producers and Refiners of Coal Tar and Its Products.

SWEEPING COMPOUND
FOR JOBBING TRADE ONLY

IT'S RED

KLEENSWEEP

THE PATENTED SWEEPING COMPOUND WITH THE SISAL BASE

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SANISWEEP

THE SWEEPING COMPOUND WITH THE SAWDUST BASE

IT'S WHITE

NEVASLIP

THE SWEEPING COMPOUND WITH THE MINERAL BASE

OUR PREPARATIONS WILL HELP YOU INCREASE YOUR SALES ON SWEEPING COMPOUND

SWEEPING COMPOUND MNFR'S CO. OF N. Y., INC.

421 BROOME STREET, NEW YORK

HOCKWALD'S DISPENSERS

No. 1N Wall Type — No. 2N Basin Type

All parts replaceable including glass globes. Can be disassembled in two minutes without mechanical skill, yet when in operation it is securely locked together. No cement or plastics used in any part of the machine.

WRITE FOR DESCRIPTIVE LITERATURE AND PRICES

Hockwald Chemical Company

135 Mississippi Street
San Francisco, Cal.

LARGEST PACIFIC COAST MFR. OF POTASH SOAPS AND SANITARY PRODUCTS

A New Departure In Crutcher Performance

The HUBER ELECTRO PERFECTION CRUTCHER is now available in a new model,—with four forward and reverse speeds. The flexibility in operating technique afforded by this wider choice of crutcher speeds should be decidedly interesting to many soap makers. Available in three sizes,—1,500, 2400 and 3200 pounds.

HUBER MACHINE CO.

"Builders of Good Soap Machinery for the Past 45 Years"

265 46th STREET — BROOKLYN, N. Y.

FOUGERE SAVON SUPREME

A FINE PERFUME OIL FOR SOAPS AND ALL SOAP PRODUCTS

FOUGERE SAVON SUPREME

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COMPAGNIE PARENTO, Inc.

Croton-on-Hudson — New York

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NAPHTHENIC ACIDS

● CRUDE, SEMI-REFINED AND FULLY REFINED GRADES AVAILABLE IN VARIOUS ACID NUMBER RANGES

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108 W. 2nd St., Los Angeles, Calif.

Will Purchase Immediately—Pneumatic Packaging Machine, used for chips, powder, cleanser; also dry mixers, chip dryers, crutchers, and automatic soap press. Address Box No. 865, care *Soap.*

For Sale: Soap cutting table and slabber. Never been used. Bargain. Industrial Materials Company, Buck & McCall Streets, Houston, Texas.

Wanted: Soap chip dryer, Proctor & Schwartz preferable. Blanchard No. 10A soap powder mill or similar type. Address Box No. 877, care *Soap.*

Rebuilt Guaranteed Machinery: Crutchers; Plodders; Jones Automatic Soap Press; Foot Presses; Proctor Soap Dryer; Lehmann 3 Roll Inclined Water Cooled Steel Roller Mill; 4 Roll Stone Mill; Johnson Carton Sealers; Powder Fillers; 6 Knife Chipper, Mixers; Grinders, Boiling Kettles; Cutting Tables; Soap Frames; Filters & Filter Presses, etc. Send for Soap Bulletin No. 402. Stein Equipment Corp., 426 Broome Street, New York City.

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Reg. U.S. Pat. Off.

an

AMERICAN PRODUCT

Similar to Italian Pumice
In physical and chemical properties.

Write for samples and 12 page booklet of information

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PUMICE DIVISION
(Subsidiary Barnsdall Oil Co).
SENECA, MISSOURI, U. S. A.

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2nd Edition
by
A. HARVEY, F.C.S.

A practical book dealing with basic principles of laundry chemistry. Of use to the supplier of laundry materials as well as to the laundry operator. Typical chapter headings follow:

ACIDS, ALKALIS AND SALTS
WATER
OILS AND FATS
SOAP
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BLUES AND BLUEING
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TEXTILE FIBERS
STAIN REMOVAL
PEROXIDES

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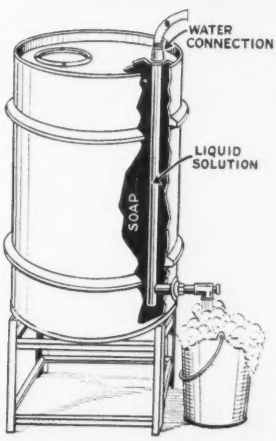
Peck's Dispenser Soaps
in ideal economy Soap Saving Drums
Nu-Crown—Varnishoyl—Babco Bases



- Convenience
- Efficiency
- Non-Clogging
- Economy

A convenient system of soap dispensing. In use often or only occasionally, the conversion is always a uniform solution.

Add water thru top of drum and let stand several hours, then draw soap solution from bottom. Can then be diluted further if desired.

We invite your inquiries

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NEW YORK . . . . KANSAS CITY
Manufacturers for Jobbers Exclusively

CARNAUBA—

Direct Importers
of All Grades

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BEESWAX
HIGH MELTING-POINT
PETROLATUM
JAPAN WAX
And Other Waxes

DISTRIBUTING AND TRADING COMPANY, INC.

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HIGH BOILING
TAR ACIDS

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TAR ACID
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202 Common Household Pests
of North America

by Hugo Hartnack

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Just fresh from the press is this new text,—invaluable to the manufacturer of insecticides and the exterminator, dealing with common household insect pests. The contents total 352 pages, with some 300 illustrations.

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ON your way to see the World of Tomorrow . . . pause for a glimpse of this old city's glorious past. Baltimore—with its roots deep in the proud history of our nation, has matched our country's modernization stride for stride—but the Lord Baltimore, newest, finest hotel in the city, has not lost an appreciative sense of what old-time Baltimore hospitality meant.

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BREAK YOUR TRIP WITH A PLEASANT STOPOVER IN BALTIMORE

Raw Materials and Equipment

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index of Advertisements, page 133, for page numbers. *"Say you saw it in SOAP."*

ALKALIES

American Cyanamid & Chemical Corp.
John A. Chew, Inc.
Columbia Alkali Co.
Diamond Alkali Co.
Dow Chemical Co.
Eastern Industries
Hooker Electrochemical Co.
Innis, Speiden & Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

BULK AND PRIVATE BRAND PRODUCTS

Ampion Corporation (Soaps and Sanitary Chemicals)
Associated Chemists, Inc. (Insecticides)
Baird & McGuire, Inc. (Disinfectants)
Buckingham Wax Corp. (Wax Products)
Candy & Co. (Wax Products)
Chemical Mfg. & Dist. Co. (Soaps and Sanitary Chemicals)
Chemical Supply Co. (Disinfectants, etc.)
Clifton Chemical Co. (Soaps and Sanitary Chemicals)
Davies-Young Soap Co. (Soaps and Floor Wax)
Federal Varnish Co. (Wax Products)
Fuld Bros. (Soaps and Sanitary Chemicals)
James Good, Inc. (Sanitary Chemicals)
Harley Soap Co. (Soap Specialties)
Higley Chemical Co. (Floor Seal)
Hockwald Chemical Co. (Sanitary Chemicals)
Hysan Products Co. (Sanitary Chemicals)
Koppers Co. (Disinfectants)
Kranich Soap Co. (Potash Soaps)
M. & H. Laboratories (Floor Waxes)
Pecks Products Co. (Soaps and Sanitary Chemicals)
Philadelphia Quartz Co. (Detergents)
Reilly Tar & Chem. Co. (Floor Seals)
Geo. A. Schmidt & Co. (Soaps)
Superior Soap Corp. (Soaps and Waxes)
Sweeping Compound Mfrs. Co. (Sweeping Compound)
Twin City Shellac Co. (Wax Products)
Uncle Sam Chemical Co. (Sanitary Chemicals)
T. F. Washburn Co. (Wax Products)
White Tar Co. (Disinfectants, etc.)
Windsor Wax Co. (Wax Products)

CHEMICALS

American-British Chemical Supplies
American Cyanamid & Chemical Corp.
Chemical Mfg. & Dist. Co.
John A. Chew, Inc.
Columbia Alkali Co.
Cowles Detergent Co.
Diamond Alkali Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Eastern Industries
General Chemical Co.
Hooker Electrochemical Co.
Industrial Chemical Sales Div.
Innis, Speiden & Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Philadelphia Quartz Co.
Rohm & Haas Co.
Reilly Tar & Chemical Corp.
Solvay Sales Corp.
Standard Silicate Co.
Jos. Turner & Co.
Victor Chemical Works
Warner Chemical Co.
Welch, Holme & Clark Co.

COAL TAR RAW MATERIALS

(Cresylic Acid, Tar Acid Oil, etc.)

American-British Chemical Supplies
American Cyanamid & Chemical Corp.
Baird & McGuire, Inc.
Barrett Co.
Innis, Speiden & Co.
Koppers Co.
Mirvale Chemical Co.
Monsanto Chemical Co.
Neville Co.
Pittsburgh Coal Carbonization Co.
Reilly Tar & Chemical Co.
White Tar Co.

COLORS

Fezandie & Sperrle
Interstate Color Co.
Pylam Products Co.
Tamms Silica Co.

CONTAINERS AND CLOSURES

American Can Co. (Tin and Fibre Cans, Steel Pails)
Anchor-Hocking Glass Corp. (Closures and Bottles)
Continental Can Co. (Tin Cans)
Crown Can Co. (Tin Cans and Steel Pails)
National Can Co. (Tin Cans)
Owens-Illinois Glass Co. (Bottles and Closures)
Williams Sealing Corp. (Closures)

DEODORIZING BLOCK HOLDERS

Clifton Chemical Co.
Fuld Bros.
Garnet Chem. Corp.
Hysan Products Co.

INSECTICIDES, SYNTHETIC

American Cyanamid & Chemical Corp.
Associated Chemists, Inc.
Dodge & Olcott Co.
Rohm & Haas Co.
U. S. Industrial Chem. Co.
Whitmire Research Corp.

MACHINERY

Anthony J. Fries (Soap Dies)
Houchin Machinery Co. (Soap Machinery)
Huber Machine Co. (Soap Machinery)
R. A. Jones & Co. (Automatic Soap Presses and Cartoning Machinery)
Karl Kiefer Machine Co. (Filling Machinery)
Koppers Company (Coal Tar Plants, Power Plants, Valves, Castings, Pipe, Tanks)
Mixing Equipment Co. (Tanks, Mixers)
Proctor & Schwartz (Dryers)
C. G. Sargent's Sons Corp. (Dryers)
Sprout, Waldron & Co. (Mixing, Conveying, etc.)
Stokes & Smith Co. (Packaging Machy.)

Feature the new 4-in-1* Applicator in connection with your self-polishing wax, varnishes, seals, etc.

It will make your customers and prospects more satisfied with your own products.

Don't be satisfied with anything less than the newest and best.

The 4-in-1 Applicator is the cheapest in the long run.

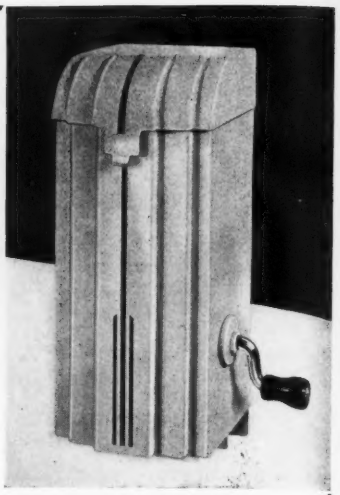
* Patent Pending

Send for Samples and Literature

AMERICAN STANDARD MFG. CO.
2509-13 S. Green St. Chicago, Ill.

Simplex Non-Clog→

Simplex Junior



Two *New* All-Metal

DISPENSERS for POWDERED SOAPS

Rugged construction . . . especially designed for hard use in shops, factories, garages, etc. . . . simple adjustment regulates flow of soap . . . lock to wall, making dispensers theft-proof . . . Write for further particulars and prices.

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St. Paul Minnesota

TALLOW
LARD OIL
NEATSFOOT OIL
ANIMAL STEARINE
ACIDLESS TALLOW OIL

Prompt Delivery—Drums, Barrels, or Tank Cars.

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Bridesburg P. O. Philadelphia, Pa.

NEVILLE

TAR ACID OILS

for Better Disinfectants

15%, 18% and 25% Frozen Tar Acid Oils with low benzophenol content. Natural oils of good uniformity, color and highest quality.

Send us your inquiries for tank cars and drums; also for Coal-Tar Solvents, Creosote and Termite Oils, and other Coal-Tar Products.

Samples on Request

THE NEVILLE COMPANY
PITTSBURGH • PA.

Raw Material and Equipment Guide

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MACHINERY, USED

Consolidated Products Co.
Newman Tallow & Soap Machinery Co.

MISCELLANEOUS

American Standard Mfg. Co. (Wax Applicator and Mops)
Anchor-Hocking Glass Corp. (Metal Caps)
Barnsdall Tripoli Co. (Pumice and Tripoli)
Dow Chemical Co. (Germicides, Agricultural Insecticides, Fumigants)
Filtrol Corp. (Purifying and Decolorizing Clay)
General Petroleum Corp. (Naphthenic Acids)
Hercules Powder Co. (Pine Oil, Rosin, Ins. Activator)
Industrial Chemical Sales Div. (Decol. carbon, Chalk)
Innis, Speiden & Co. (Fumigants)
Koppers Company (Coal, Coke, Roofing Materials)
Newport Industries, Inc. (Pine Oil and Rosin)
Pennsylvania Refining Co. (White Oils)
Pylam Products Co. (Lathering Agent)
Reilly Tar & Chem. Co. (Preservatives)
Steryl Prods. Corp (Toilet Deodorizer)
Tamms Silica Co. (Silica, Volcanic Ash, etc.)
Victoria Paper Mills Co. (Toilet Tissues)

OILS, FATS, AND FATTY ACIDS

Eastern Industries
Emery Industries, Inc.
Independent Manufacturing Co.
Industrial Chemical Sales Div.
Leghorn Trading Co.
Newman Tallow & Soap Machinery Co.
Orbis Products Corp. (Stearic Acid)
Wecoline Products Co.
Welch, Holme & Clark Co.

PARADICHLORBENZENE

John A. Chew, Inc.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Hooker Electrochemical Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.

PERFUMING MATERIALS

American-British Chemical Supplies
Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
Dow Chemical Co.
P. R. Dreyer Inc.
E. I. Du Pont de Nemours & Co.
Felton Chemical Corp.
Firmenich & Co.
Fritzsche Brothers, Inc.
General Drug Co.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Co.
Norda Essential Oil & Chemical Co.
Orbis Products Corp.
Rifa—New York, Inc.
Ungerer & Co.
Van Ameringen-Haebler, Inc.
Albert Verley, Inc.

PETROLEUM PRODUCTS

Deodorized Insecticide Base, White Oils, Petrolatum, Paraffine Oils, Residues, etc.)

Atlantic Refining Co.
General Petroleum Corp.
Pennsylvania Refining Co.
L. Sonneborn Sons, Inc.

PHOSPHATES

Trisodium, Sodium Pyrophosphate, etc.)

American Cyanamid & Chemical Corp.
John A. Chew, Inc.
E. I. du Pont de Nemours & Co.
General Chemical Co.
Monsanto Chemical Works
Victor Chemical Works
Warner Chemical Co.

PYRETHRUM AND DERRIS PRODUCTS

Insect Flowers and Powder, Pyrethrum Extract, Derris Products)

Associated Chemists, Inc.
Derris, Inc.
Dodge & Olcott Co.
S. B. Penick & Co.
R. J. Prentiss & Co.
McCormick & Co.
McLaughlin, Gormley, King Co.
John Powell & Co.
Whitmire Research Corp.

SILICATES

E. I. du Pont de Nemours & Co.
General Chemical Co.
Philadelphia Quartz Co.
Standard Silicate Co.

SOAP DISPENSERS

Ampion Corp.
Bobrick Mfg. Co.
Clifton Chemical Co.
Fuld Bros.
Garnet Chem. Corp.
Hockwald Chemical Co.
Presto Mfg. Co.

SPRAYERS

Breuer Electric Mfg. Co. (Electric)
Dula Manufacturing Co. (Electric Steam)
Fumeral Co. (Spraying Systems)

WAXES AND GUMS

Carnauba, Shellac, Candelilla, etc.)

American Cyanamid & Chem. Corp.
T. G. Cooper & Co.
Distributing & Trading Co.
Innis, Speiden & Co.
Lenape Trading Co.
The Mac Lac Co. (Shellac)
Mantrose Corp. (Shellac)
Twin City Shellac Co. (Shellac)

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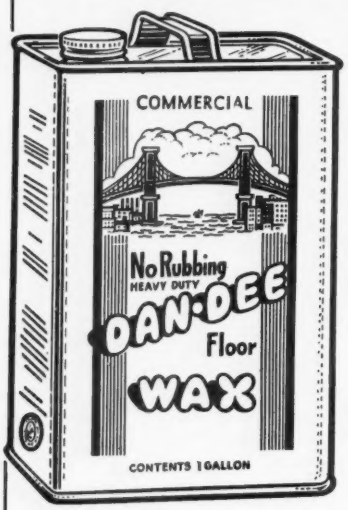

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WATER RESISTING
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PRIVATE LABELS SUPPLIED

Specially Priced for Drums, ½ Drums and 5 Gal. Cans

Full Details—Generous Samples Available Upon Request

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340 FLUSHING AVENUE BROOKLYN, N. Y.
Also Manufacturers of Liquid and Paste Wax

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Liquid Soap Base
Potash Oil Soap
Liquid Soap
U. S. P. Green Soap
Auto Soaps
Shampoo
Pine Oil Soap
Shampoo Base
U. S. P. Cresol Compound
Coal Tar Disinfectants
Pine Oil Disinfectants
Insecticides
Liquid Floor Wax

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Ask for samples of above specialty bulk products.

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Quality Colors
for
TOILET SOAPS
LIQUID SOAPS
TOILET PREPARATIONS

Long experience enables us to produce colors for all types of soaps.

If you have a shade you want matched send us a sample. We have complete facilities for matching.

Liquid soap colors a specialty—send for samples of F. & S. greens and ambers.

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205 FULTON STREET
NEW YORK, N. Y.
Import—Manufacture—Export

SECOND EDITION
of
MODERN COSMETICS
by FRANCIS CHILSON

Complete revision of text, addition of many new chapters, revised and new formulas all rigidly tested.

The first complete and authoritative text on production procedure for all cosmetics, makes an invaluable new addition to this second edition.

$6.00 PER COPY
(PLEASE REMIT WITH ORDER)

Mac NAIR-DORLAND COMPANY
254 West 31st St., NEW YORK, N. Y.

Professional Directory

Skinner & Sherman, Inc.
246 Stuart Street, Boston, Mass.
Bacteriologists and Chemists
Disinfectants tested for germicidal value or phenol coefficient by any of the recognized methods.
Research—Analyses—Tests

H. A. SEIL, Ph.D. E. B. PUTT, Ph.C., B.Sc.
SEIL, PUTT & RUSBY, INC.
Analytical and Consulting Chemists
Specialists in the Analysis of Organic Insecticides, Pyrethrum Flowers, Derris Root, Barbasco, or Cube Root—Their Concentrates and Finished Preparations
DRUGS — ESSENTIAL OILS — SOAP
16 East 34th Street, New York, N. Y.

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Analytical and Consulting Chemists
Members Association of Consulting Chemists and Chemical Engineers
130 Cedar Street New York City

Soaps • Waxes • Polishes
Detergents • Disinfectants
Analysis Research
Formula Development
Hochstadter Laboratories INCORPORATED
254 West 31st St. New York City

KILLING
strength of Insecticides
by PEET GRADY METHOD
PYRETHRINS in PYRETHRUM FLOWERS
(by Gnadinger or Seil Method)
We raised and killed more than 1 million flies in the last 2 years
ILLINOIS CHEMICAL LABORATORIES, INC.
GRIDLEY, ILLINOIS

CONSULTANTS
offering their services to manufacturers of soaps and sanitary specialties should apprise the industry of their facilities through this professional card department. SOAP reaches 4,000 firms needing help of a professional nature.

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Every Form of Chemical Service
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ALAN PORTER LEE, Inc.
Contracting and Consulting Engineers
Design and Construction of Equipment and Plants for Producing and Processing Fats, Oils, Soaps and Related Products
136 LIBERTY STREET, NEW YORK, N. Y.
Cable Address: "ALPORTLE", New York

Refer To Your 1940
BLUE BOOK
for F.D.A. Method for Testing of Disinfectants and Antiseptics.
Official N.A.I.D.M. Method for Testing and Grading of Insecticides.
Free with a $3.00 subscription to SOAP.
$4.00 Foreign
MAC NAIR-DORLAND CO.
Publishers
254 W. 31st Street New York, N. Y.

CONSULTANTS
offering their services to manufacturers of soaps and sanitary specialties should apprise the industry of their facilities through this professional card department. SOAP reaches 4,000 firms needing help of a professional nature.

. . . good to June 1, 1941.

IN ACCORDANCE with a recommendation adopted at the last meeting of the National Association of Insecticide & Disinfectant Manufacturers on June 19, 1940, at Lake Wawasee, Ind., the 1940 Official Test Insecticide will remain official for testing insect sprays until June 1, 1941. In other words, the fiscal year for the Official Test Insecticide will hereafter be from June 1 to June 1. Stocks of 1940 O.T.I. are available for immediate shipment from the office of the Association as given below.

▼

National Association of
Insecticide & Disinfectant Manufacturers, Inc.
110 East 42nd Street New York

OFFICERS

President . . . . . W. J. ZICK, Stanco, Inc., New York
First Vice-President . . . . . JOHN CURLETT, McCormick & Co., Baltimore
Second Vice-President . . . . H. A. NELSON, Chemical Supply Co., Cleveland
Treasurer . . . . . JOHN POWELL, John Powell & Co., New York
Secretary . . . . . IRA P. MACNAIR, MacNair-Dorland Co., N. Y.

BOARD OF GOVERNORS

GORDON M. BAIRD
Baird & McGuire, Inc., Holbrook, Mass.
J. L. BRENN . . . Huntington Labs., Inc., Huntington, Ind.
N. J. GOTHARD . . Sinclair Refining Co., E. Chicago, Ind.
H. W. HAMILTON . . . . . White Tar Co., Kearny, N. J.
DR. E. G. KLARMANN
Lehn & Fink, Inc., Bloomfield, N. J.
WALLACE THOMAS . . . . . Gulf Refining Co., Pittsburgh
DR. E. G. THOMSSEN . J. R. Watkins Co., Winona, Minn.
CLARENCE WEIRICH . . C. B. Dolge Co., Westport, Conn.
R. H. YOUNG . . . . Davies-Young Soap Co., Dayton, O.

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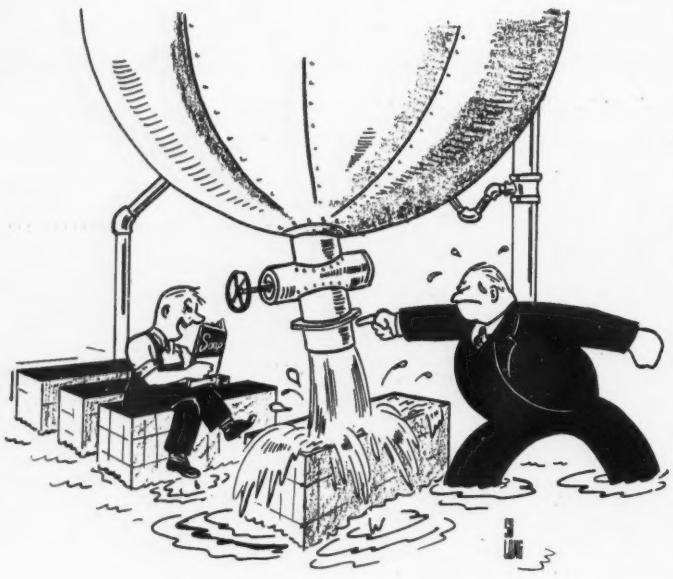

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CARELESS washing of dishes, and especially forks and spoons, is held by some health authorities to be a greater factor in the spread of disease, especially the common cold, sore throat, etc., than is generally believed. This may account for an extension in the study of scientific and sanitary dish washing among household economists and bacteriologists in several universities.

* * *

Although the compulsory sterilization of dishes in hotels, restaurants, etc. is a problem at which health officers the country over throw up their hands, the time is fast approaching when this problem must be faced and licked.

* * *

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* * *

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